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Early Childhood Education

► Early Childhood Sector

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Synonyms

Curriculum; Early childhood education; Knowledge; Metaphor; Sector

The rise of early childhood education (ECE) as both a unique sector of a country's education and social policy and as an important part of nation's economy is a feature across many nations. Historically, each country develops its own local context, although increasingly shaped by global political and economic agendas. Aotearoa New Zealand's ECE system is the focus of this entry, where the metaphor of the *sector* (as ECE is frequently referred to) is explored to interrogate ambivalent claims to knowledge and practice. This short study by way of a singular metaphor – *sector* – explores more than 20 years of intense development that reflects a curious confabulation of complex discourses dominated by various forms of neoliberalism.

Almost without exception, ECE developments globally have centered around the notion of quality – an important aspect of production and consumption in economic discourse but arguably less applicable to education as an ethical enterprise involving personal engagement and respect for the dignity of its human subjects. For consumers, standardized products of uniform consistency constitute the basis for relying on particular products to perform their prescribed functions. In the marketplace, standardized quality benchmarks establish the basis for assessing the suitability and usefulness of such products, with consumer guarantee legislation now ensuring that products are fit for their intended purpose. Although quality benchmarks and indicators may be necessary, even beneficial in the service and manufacturing sectors, their application to the education of young children is, at best, problematic, in that it is not clear what the word actually refers to. Although heavily critiqued by educationalists (e.g., Dahlberg and Moss 2005), the idea of quality has underpinned significant policy development in New Zealand.

New Zealand's early childhood education has been heralded by many scholars as a world leader for its development of curriculum, policy, and practice. Especially celebrated are its bicultural curriculum document *Te Whāriki* (Ministry of Education [MoE] 1996) and related planning and assessment practice *learning stories* (MoE 2004). The cause for celebration is as much the collaborative process of its development as the inclusive

nature of its contents. Since policy developments of the late 1980s, and the inception of the curriculum in the 1990s, a comprehensive policy and regulatory framework (in the form of specific policies, strategies and funding) has annexed ECE, now largely privatized, to the stronger State-funded compulsory education sector. Although attendance is still voluntary, recent government initiatives (including financial incentives) intensify the pressure on families for their children to participate in formal, licensed early childhood education programs. Various social services have been recruited to help meet the government's escalating targets for participation rates, currently set at 98%. The onus is increasingly being shifted onto early childhood centers to make themselves desirable enough to attract sufficient numbers of enrollments to ensure economic viability. New Zealand's early childhood education sector has clearly been marketized and can be seen as a forerunner for the marketization of the compulsory education sectors in New Zealand, including recent growth in government funding to support and develop special interest charter schools.

The economic reforms of the 1980s and 1990s inexorably altered the face of early childhood education in line with other areas of social policy in New Zealand. These reforms largely followed a new right political and economic direction, effectively decentralizing government departments, including health, education, and social welfare, to form self-managing units run according to marketized principles. This neoliberal reformulation of the social services entailed proliferation of the dominant values of modern capitalism, including competitive individualism, commodification, and consumption, along with entrepreneurial flexibility in reinventing ourselves to meet the demands of economic intensification. Within this new reality, early childhood is now seen as a mechanism for facilitating women's reentry into the workforce, as an alternative to dysfunctional families for the socializing of children, as an observation and monitoring site for early intervention and protection of vulnerable children, and as a pathway for building a healthy and wealthy State. The recent intensification of

interest in early childhood by government, parents, employers, and communities marks out early childhood as an increasingly contested site for implementation of social policy and renders early childhood as a clearly identifiable sector in New Zealand's education. The idea of early childhood education as a sector has been around, then, at least since the integration of early childhood services in the mid-late 1980s. Early childhood education in other OECD countries has received similar economic emphases and undergone parallel developments, although for manageability, the policy focus of this entry is deliberately limited to developments within New Zealand.

With that background in place, the entry now turns to the conceptualization of early childhood as "sector" and some implications of such a concept for early childhood knowledge/discourse. To frame our thinking within particular concepts in any knowledge domain is necessarily to shape or delimit how we might think about that domain, and by extension, the way we understand knowledge. The converse is also true: what we mean by "knowledge" shapes the way we understand the domain. The rest of this article focuses on the way the word *sector* is used to describe early childhood education, and how the resulting discourse then impacts reflexively on that sector. Such theorizing acknowledges that a particular representation is never an accurate depiction of reality, suggesting that describing early childhood education as a sector is, at best, a metaphor that (like all metaphors) conceals as much as it reveals about its referent. Belying the homogeneity captured or implied in a label such as "sector," the various individuals and organizations that comprise the early childhood sector are members of diverse communities, constructed by a variety of discourses – unique subjects "precariously and temporarily sutured at the intersection of those subject-positions" (Mouffe 1988, p. 44).

Sector as a Metaphor

Metaphor is generally understood as understanding and experiencing one thing in terms of another, for example, we may attribute an intelligent person

with a *razor* wit. Metaphor is not a matter of playing with language; how we perceive, how we think, and what we do are largely metaphorical (Lakoff and Johnson 2003). Metaphor use is systematic – it shapes understanding, experience, and the way we talk. Most concepts are partially understood in terms of other concepts. The *razor* wit metaphor attributed to the intelligent person in the above example provides a conception of the person as having a *sharp* mind who could perhaps *cut* this argument to *ribbons*. Metaphors such as the *razor* wit, the *keen* mind, the *sharp* thinker, and the person who can *cut right to the heart of things* with a *cutting* remark are so pervasive that they are often taken as self-evident. That they are metaphorical may not occur to us, yet it is the way most think and operate. Metaphorical thought then is normal and ubiquitous, conscious and unconscious, yet provides a coherence to our thinking. As principal vehicles for understanding, metaphors play a central role in the construction of social and political reality through a "coherent network of entailments that highlight some features of reality and hide others. The acceptance of the metaphor, which forces us to focus only on those aspects of our experience that it highlights, leads us to view the entailments of the metaphor as being true" (Lakoff and Johnson 2003[1980], p. 157).

Dictionary definitions generally refer to a sector as representing a distinct part of something – in particular a part of society such as a nation's economy, the housing sector, the educational sector, etc. This involves an understanding of sector as a group with some sort of shared perspective ("we") with appeals to ideals of community and belonging – an appeal to being part of that group with affiliations and ties. This interpretation sits comfortably with the community and family focus of ECE. There are a range of other entailments, which, in the following exploration, provide interesting perspectives on some of the developments in ECE. The rest of this section explores the etymology of the word *sector*, along with other entailments in the metaphorical use of the word. Space limits the number of possibilities for exploration, but there are, it is hoped, sufficient to support the claim made here for multiple nuances in our understanding of early childhood and the

sector that purports to act as its representative and its champion.

Sector as "Cutting"

The word *sector* is derived from the Latin *sectus* (past participle of *secare* to cut). So a sector may be thought of as resulting from some kind of cut. Our choice of cutting instrument has a significant bearing on the kind of cut we make. Chainsaws and scalpels are both perfect instruments for cutting, albeit for different purposes. In everyday language, we refer to various types of cuts often with metaphorical allusion: clean/clear cut (decisive action), cold cuts (pieces of meat), sweeping cuts (radical changes), and cut throat (unscrupulous violence). Cuts may refer to variations to the way resources are apportioned (salary or funding cuts).

Cuts are made with various intentions: perhaps to segment or to reshape, to make something look different, to make a structure smaller or weaker (as in cutting down a tree), or to make a large object more manageable by being able to manipulate its pieces. In the medical surgery, a cut from the surgeon's scalpel may be associated with putting something right, curing an illness – the skillful and incisive crafting to put right injured/diseased organs in order to heal and to make better. Although the cut ostensibly causes further damage, the intended outcome is repair – short-term pain for long-term gain – a metaphor carried through to many familiar social situations involving delayed gratification, such as saving for long-term spending goals, working hard to achieve peak fitness, or having a rest after the work is complete. The nature of a cut, then, depends on who is making the cut, their intentions, and their ability to carry out the incision properly.

In defining the early childhood sector, a significant instrument of identification is the curriculum, *Te Whāriki* (MoE 1996) – the result of cutting or dividing up areas of knowledge, sociocultural development, and pedagogical theories to align with expressed aspirations for competent, capable children. In terms of the current "cutting" metaphor, the curriculum could not be adequately justified in terms of weakening, manipulation, or mere reshaping of knowledge. Arguably, there is

surgical intention in segmenting the curriculum as a specific area of knowledge to engage in skillful and incisive crafting with the intentions of making things better – an intention which many working with *Te Whāriki* would argue is largely successful.

Another aspect of curriculum is evident in our "cutting" metaphor, though, in the phrase "cutting someone off" when driving a car or engaging in a conversation. When we cut people off, we get in their road, usurp their place, try to reach a destination faster than them, or superimpose our version of how things are/should be over and above others. Within the ECE sector, it may entail prescription from positions of formal authority about curriculum or procedural policy. Complying with such prescription is often prerequisite to institutional funding, or even organizational survival, since satisfactory audit reports and continued funding are generally conditional upon such compliance. Compulsory compliance is an issue if one considers curriculum as contestable, with decreasing choice allowed about whether to adopt standards, pre-specified learning outcomes and performance targets as the course for young children to follow under the name of education. For government and for efficient management, imposition of authority may facilitate achieving a preferred outcome with speed and efficiency. Similarly, measurability may provide indications of progress toward targets in imposing strands, dispositions, and stories as specific teaching interventions, but it is doubtful whether superimposing particular prescriptions on others does justice to education in its fullest sense.

Sector as a Geometric Segment

In various MoE statistical publications, the early childhood sector is represented as a segment of a circle, like a wedge of cheese or a pizza slice. The size of the slice represents the level of privilege or the comparative funding of each sector. This is a quantifying reference, in that it is the significance of a sector that is assessed relative to the proportion of the circle compared with other sectors. Within the early childhood sector, similar figures are used to represent the comparative importance of the various services that comprise the sector, serving as a de facto ranking mechanism. This kind of segmented pie chart signifies the spread of limited available resources among the represented sectors, providing a "zero sum" model of allocation that sets each sector off against all the others. In other words, the problem is made into a competition among sectors for a given and limited resource rather than calling into question the whole basis for the model. Problems in geometry often start with the "given" within which one has to solve particular problems; it is not a legitimate move in geometry to ignore the givens or to challenge the geometric nature of the problem. By analogy, it is not considered legitimate to contest the overall level of resource allocation. Despite government and OECD rhetoric about the importance of early childhood education, a recent NZEI campaign grew wings on the slogan "The biggest cuts to the smallest people." It may be legitimate, though, to question the intentions of the cutter.

Sector as Territory

From the Greek for area or division, the word *sector* was used in WW1 to refer to the part of a military zone based on a circle around a headquarters. Such an area is designated by boundaries within which a unit operates, and for which it is responsible, such as a division or headquarters. In reference to early childhood, we might think in this way about ministries, government agencies, the early childhood center, or the home as centers of various sectors. In each case, we might impose boundaries and designate a bounded territory using physical walls, fences, buildings, an abstract line, or merely an idea. The idea of territoriality appeals to our human instincts: we are physical beings bounded by our skins, we experience the world as outside ourselves, and we have familiar boundaries inside which we belong. This idea is inherent in the very notion of early childhood centers as places marked out for children. It may be stretching the metaphor too far to describe as a sector the space prescribed for ECE centers in the MoE where licensing regulations require a minimum of two square meters per child. It would

mean each time a child moves, the boundaries are redrawn – perhaps a very productive metaphor for the flexible, playful possibilities of early childhood.

Conclusion

Within this exploration of the early childhood sector and its various entailments is a serious observation that marking out a sector constitutes both a set of discourses and a set of practices, shaping our experience and the way we talk about it. Reflexively, the resulting discourse impacts on that sector in a dynamic and formative way. The ubiquity of metaphor within discourse means that our daily conversations and "common sense" dialogue mask a range of metaphorical entailments that may remain hidden but continue to impact on the way we interpret our experience.

Despite the supposedly homogenizing impact of globalization, New Zealand is one of many countries whose population is increasingly multi-ethnic/multicultural. This complexity is amplified by neoliberal economic demands for a flexible workforce, comprised of competitive individuals, able to solve future problems that do not yet exist and able to thrive amid the plethora of visions for our social and technological futures. Even if it were possible to pin down the early childhood sector within a static, literal definition, it would be an immense problem to secure agreement among the myriad voices about how to respond in any meaningful way. Compounding the issue infinitely is inevitability of metaphorical allusion to represent the future visions and the current actions of what we call the early childhood sector. Possibly, the best we are left with is to acknowledge the problematic and complex nature of early childhood contexts and their competing forms of knowledge and to be aware of the metaphorical imposition of our individual and collective pleasures, fears, and desires on the constitution of early childhood. Whether we are promoting the rhetoric of quality, the politics of participation, or a particular prescription for the early childhood

sector, it is important to acknowledge that each of us has different views about what these things mean and what we might expect from them.

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Education and Big Data

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Synonyms

Analytics; Big data analytics; Large data set; Learning analytics

Introduction

Big data is a significant concern for many academics, largely because it is complex, unmanageable, and open to misuse. While there is a tendency to believe that "big data" might be bad and possibly dangerous, many types and uses for it exist. The challenge of big data for higher education is that it has been, until fairly recently, portrayed as something that is straightforward, clear, and easily delineated, when in fact it is none of these, and there is still relatively little consensus about how it might be defined. This entry explores how big data is defined, described, and utilized in different contexts. It explores different notions of analytics and suggests how these are having an impact on higher education. The entry then explores the claims that are being made about the objectivity of big data and sets these claims in the broader context of what can be claimed and what cannot. In the context of such claims, the way in which the ideas about what is plausible, possible, and honest in the use of big data is examined, and suggestions are offered about what may be useful and realistic uses of big data. The final section explores the possible futures for research and use of big data in the context of higher education and offers some suggestions as to ways forward.

Definitions of Big Data

For many researchers in higher education and across the disciplines in general, big data is

invariably expected to offer new insights into diverse areas from terrorism to climate change. Yet at the same time, big data is also troublesome, since it is perceived to invade privacy and increase control and surveillance. Definitions of big data are wide and varied, for instance, there are definitions that concentrate on scale or diversity and others that focus on the economics of big data. For example, Taylor et al. (2014, p. 3) cite examples such as the number of variables per observation, the number of observations, or both, given the accessibility of more and more data – what Varian, Chief Economist at Google, referred to as "fat data, long data, extensible data, and cheap data." However, Einav and Levin (2014) argue for three main features of big data:

1. Sources are usually available in real time.
2. The scale of the data makes analysis more powerful and potentially more accurate.
3. Data often involve human behaviors that have previously been difficult to observe.

Kitchin (2014, pp. 1–2) delineates big data as:

- Huge in volume, consisting of terabytes or petabytes of data
- High in velocity, being created in or near real time
- Diverse in variety, being structured and unstructured in nature
- Exhaustive in scope, striving to capture entire populations or systems (n = all)
- Fine grained in resolution and uniquely indexical in identification
- Relational in nature, containing common fields that enable the conjoining of different data sets
- Flexible, holding the traits of extensionality in that it is possible to add new fields easily, as well as expand in size

There is little consensus about what counts as big data, but many across the higher education sector see it as worthy of attention. Conceptions of big data tend to fuse across the realms of collecting large data sets and the processes of managing such data sets as well as examining how, by whom, and for whom the data sets

might be used. For scientists, Kitchin's stance (Kitchin 2014) seems a good fit, but those in social sciences and humanities tend to use the term data differently. For example, researchers in the social sciences see big data encompassing not just large date sets but also the complexity of how data are synthesized, the ways in which tools are used, and who makes which decisions about management of possible imbalances between data collection, management, and synthesis. Sometimes, assumptions and uses related to big data can be naïve (Brynjolfsson and McAfee 2012). Further, there are a number of difficulties with big data analysis such as the shortcomings of off-the-shelf packages, the storage of data, and possible efficiencies in distributed processing. Table 1 summarizes different ways in which disciplines are seeing and using big data.

Assorted Analytics

There are currently many different types of analytics in higher education, but it is only relatively recently that it has been termed learning analytics. However, learning analytics is in fact rooted in a longer tradition such as educational data mining and academic analysis. Currently (in 2015), learning analytics in education and educational research focuses on the process of learning (measurement, collection, analysis, and reporting of data about learners and their contexts), while academic analytics reflects the role of data analysis at an institutional level. For many researchers in higher education, learning analytics and data analytics are seen as fields that draw on research, methods, and techniques from numerous disciplines ranging from learning sciences to psychology.

This melange of ideas, constructs, and approaches is reflected in the varieties of methodologies being used across different institutions. For example, in the process of analyzing big data, discipline-based pedagogy and disciplinary difference are often transposed in ways that do not necessarily reflect the nuances of the discipline. Furthermore, it is evident that different institutions are using different approaches to collecting and analyzing data. These include Oracle data

Education and Big Data, Table 1 Big data in different disciplines

Context	Understanding and use of big data	Characteristics
Economics (Taylor et al.)	Specific terminology seen as fairly recent – some were working with what is now being termed "big data" a decade ago and believe it has not gained much traction within academic economics	Seen as a class of data which was particular in terms of its size and complexity, although there were several different points of view as to which features rendered it genuinely new
Digital humanities (Manovich 2012)	The use of data analytics to analyze and interpret cultural and social behaviors	Complex overview of data, visual representations of images and videos, exploration of patterns of representation
Education (Sclater 2014)	Use of data to analyze student retention, student engagement, and identification of risk and to examine student progress	Data seen as useful for gaining information, tracking possible problems by student, tutors, and senior management
Business (Brynjolfsson and McAfee 2012)	Use of data to make predictions and management decisions	Information from social networks, images, sensors, the Web, or other unstructured sources are used for decision making in business
Journalism (Lewis 2015)	Journalism that incorporates computation and quantification in diverse ways, for example, computer-assisted reporting	The implementation of mathematical skills in news work as well as the critique of such computational tools
Maths and statistics (Housley et al. 2014)	Creating mathematical tools for understanding and managing high-dimensional data	Tools, algorithms, and inference systems seen as vital for analysis of data within maths and statistics but also other disciplines using big data
Computer science (Rudin et al. 2014)	Use of methods for statistical inference, prediction, quantification of uncertainty, and experimental design	Use of multidisciplinary teams with statistical, computational, mathematical, and scientific domain expertise with a focus on turning data into knowledge
Medicine and health (Lee and Yang 2015)	Predicting and modeling health trends	Locating health patterns Understanding prevalence and spread of disease
Psychology (Moat et al. 2014)	Predicting and modeling trends and the use of data sets to examine behaviors, influence, and use of language	Analysis of trends, behaviors, judgment, and decision making as well as spheres of influence

warehouse and business intelligence software, the use of QlikView to analyze data held in Microsoft SQL Server, and also Google Analytics, Google Charts, and Tableau (Sclater 2014). While there have been various attempts to classify analytics into a clear typology, Table 2 illustrates that issues in higher education are murky and complex. Thus, it is possible to see multiple and overlapping types, including (big) data analytics, text analytics, web analytics, network analytics, and mobile analytics.

Objectivity and Context

There have been suggestions that big data and analytics are necessarily objective. However, the complexity of their use in different disciplines means that there is little unity about how these data should be analyzed and used. It seems for many researchers, particularly in areas such as economics, that the focus is on complex analysis of big data, rather than asking critical questions about whether big data is new and what can and cannot be done with it. The result is that across the literature there is a wide range of positive and negative claims, which need to be acknowledged, including but not limited to:

Claim 1: Big data speaks for itself. This is clearly not the case since analysis and mapping are researcher driven. There is a need to ask not just what might be done with big data but why (and if) it should be used in particular ways – as

Education and Big Data, Table 2 Assorted analytics

Form of analytics	Context	Purpose
Learning analytics	Module/course level Departmental level	Analysis of student engagement, predictive modeling, patterns of success and failure
Academic analytics	Institutional National International	Analysis of learner profiles, performance of academics, knowledge flow, research achievements, ranking
(Big) Data analytics	Commercial contexts and data warehousing	Development of data mining algorithms and statistical analyses
Text analytics	Information retrieval and computational linguistics	Discovering the main themes in data such as in news analysis, opinion analysis, and biomedical applications
Web analytics	Commercial and academic context and cloud computing	Integration of data across platforms for social research and/or commercial gain
Network analytics	Academic contexts, such as mathematics, sociology, and computer science	Examination of scientific impact and knowledge diffusion, for example, the h-index
Mobile analytics	Commercial contexts but also increasingly in areas such as disaster management and health-care support	To reach many users but also increasing productivity and efficiency in a workforce
Knowledge analytics (this term tends to be used with learning analytics but is generally defined)	Commercial settings and to some degree academic settings	To manage knowledge within an organization and to use organizational knowledge to best effect

well how big and small data might be used together.

Claim 2: There are many good exemplars of big data use. This is not the case, particularly in the social sciences and education, where the landscape is complex and varied. For example, in 2013 Snowden disclosed that the US National Security Agency was monitoring domestic "metadata." The archive released by Snowden indicated that the e-mails, phone calls, text messages, and social media activity of millions of people around the world had been collected and stored and then without consent been shared and sold (Rodriguez 2013). Although this has brought to light a number of other forms of monitoring and surveillance practices, the US Government argued that it was only "metadata." The Snowden examples introduce questions for those who work in higher education about how data they collect and are data that collected about them and their students are used in covert ways. It would seem that increasingly government agencies are using big data in ways which focus on economic outcome results in unhelpful social, political, and cultural bias for educational activities. Such a stance would seem to indicate that there is increasingly a neoliberal agenda shaping higher education, with a growing belief in competitive individualism and the maximization of the market.

Claim 3: There is integration and understanding across the disciplines. While some universities have shared forums for big data, much big data remains in disciplinary silos. There is a need for greater interdisciplinarity and large teams to work together coherently.

Claim 4: There is a coherent view about how learning and academic analytics should be used. It is evident that institutions already seem to be finding themselves having to balance students' expectations, privacy laws, tutors' perspectives about learning, and the institution's expectations about retention and attainment.

These four claims exemplify the need to consider issues of plausibility and honesties in big

data research. What is often missing from claims and debates is how power is used, created, or ignored in the management and representation of big data, or where and whose voices are heard or ignored, privileged, or taken for granted.

Plausibility and Honesties

Ethical issues connected with using big data are complex and muddled. It is often assumed that just because data are public, ethical concerns can be ignored. The open, accessible, and online society has resulted in various kinds of uses of big data, one of which is tracking. For example, many people inadvertently leave tracking devices switched on their mobile phones or leave the Wi-Fi on overnight. The result is that people do not realize they are being tracked, while feeds from social networks are analyzed and visualized, personal movements tracked, and shopping behaviors noted. There is thus a serious lack of privacy, which occurs through the aggregation of users' online activities. Companies can track and aggregate people's data in ways previously impossible, since in the past people's data were held in paper-based systems or company silos. Now, personal data can be mined and cross-referenced, sold, and reused, so that people are being classified by others through sharing their own data. This use of big data is often disregarded – but it is relatively easy to discover most things about most people, and blue chip companies can use such large data sets to ensure market advantage. In day-to-day life, this open but hidden knowledge is already both accepted and ignored. There have been discussions about the need for better formal regulation and changes to the way social media are designed. Yet, almost a decade after the concerns were first raised, the suggested changes are unlikely to occur, and it is difficult to decide how security might be maintained in a post-security world. Now, as time marches on, most people are encountering various forms of liquid, participatory, and lateral surveillance (Savin-Baden 2015).

There are still questions about what it is possible to "know" from big data analyses and ethical challenges concerning what is done or not done with such analyses and findings. In higher education, the focus and interest in big data have resulted in many researchers rebadging their work as "big data research," when in fact it is not. Particularly in the humanities, this has resulted in criticism of big data research. Some years later, the pertinent criticisms and concerns of many higher education researchers still seem to have resonance. Big data has changed how data are seen, how they are used, and how they are defined. Such shifts are changing how knowledge is seen and managed in higher education. At the cusp of higher education and commerce, big data tend to be located as neutral, objective, and reliable. This, in turn, obscures the ways in which big data are covertly managed and used and the ways in which people become constructed by and through big data.

Big data, as aforementioned, can be linked to neoliberal capitalism, and engaging the current performative enterprise practices has shift the focus in higher education increasingly toward consumerism, the marketization of values, and the oppression of freedom. Thus, criticality and questioning are being submerged in the quest for fast money and solid learning. In areas of higher education that reject neoliberal capitalism, there is a tendency to shift away from the idea of big data as a resource to be consumed and as a force to be controlled and instead to ask questions summarized below.

How Accurate or Objective Is Big Data?
As a result of the way big data are constructed and used to make policy decisions, it is vital to recognize that these data can easily be a victim of distortion, bias, and misinterpretation. Driscoll and Walker (2014) illustrate how data access and technological infrastructure can affect research results. For example, they demonstrate how differences in timing or network connectivity can result in different results for the same experiment.

Is Big Data Better Data?
While it would be easy to suggest a binary relationship here, it is important to note that big data is not always representative, nor is it necessarily presenting a complete picture of the issues, nor

may it meet high enough standards of rigor and quality. Administrators, faculty, and managers in higher education may find the promise of big data alluring. Assumptions that big data is objective, with clear outcomes that will improve retention, increase student numbers, and ensure there is more money in the university coffers, make this promise highly seductive. Yet these data are not necessarily reliable, and using them for monetary ends in a sociopolitical system such as higher education brings high risk.

How Are Issues of Context To Be Dealt With in Big Data Research?

Big data sets need to be located contextually and there is a need to understand how big data are being used and understood and what is being claimed for them. There is a need for more robust studies and examples across higher education to provide an examination of issues of context by defining and critiquing how big data and definitions of it have changed over time.

What Are the Ethical Issues Associated with Big Data?

The ethical questions relate not only to how data are obtained, as in the Snowden affair (Rodriguez 2013), but who and what is subject to analysis. Ethical considerations also extend to how and where data are reported. For example, Eubanks (2014) researched the electronic benefit transfer card and food stamp use in the United States and suggested that those in poverty are already "in the surveillance future." The result is that the poor and marginalized that are more easily tracked are already being judged and assumptions made about them, which may or may not be just.

To What Extent Is Big Data Creating Digital Divides?

It seems that the expense of gaining access to big data has resulted in a restricted access to this data, with higher education necessary being marginalized as a sector. Yet the abovementioned study by Eubanks (2014), as well as other studies concerning surveillance, illustrates not merely digital divides but also suggest surveillance divides.

Big Futures

Big data is useful, yet multifaceted, and offers few, if any, quick fixes for new fields of research or data management. In education, social sciences, and humanities, it would seem that relatively few researchers are engaged in analyzing massive data sets. Perhaps the most important considerations in future big data research are to:

- See big data as part of a repertoire of data collection and analytical options.
- Use big data as a means of locating areas that can or need to be explored on a smaller scale.
- Use big data in multi-methodological ways so that the research undertaken is both wide and deep.
- Recognize the advantages, disadvantages, challenges, and power issues of working with large data sets alongside small, fine-grained data.
- Acknowledge that large real-time data sets, such as those produced by social networks, often do not provide a clear or representative picture of realities.
- Recognize that full documentation of how big data were collected will probably be unavailable, and therefore the validity of such data is likely to be unpredictable and tenuous.

Conclusion

There is a prominent expectation that big data can and will deliver more than is really possible and that its questionably clear outcomes will necessarily make a difference to the complexity of human life and experience. The contrasting view questions whether big data can offer anything particularly new or innovative while being concerned about the management of big data and how they are being used in persuasive and pernicious ways. What appears to be a consistent message is that big data is difficult to manage, analyze, and evaluate. Therefore, it is uncertain how robust findings and assumptions, as well as what has been learned, might in fact be. It is vital to recognize that big data is neither good nor bad but useful in

different ways if collated and presented with honesty and plausibility at its core.

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Education and Political Theory: Prospects and Points of View

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Synonyms

Democracy; Inequality; Political theory; Power

Introduction

Education, philosophy, and politics can be seen as the *tripos* in Western tradition, defining the canon and practices of political and educational institutions (Peters 2012). In the light of recent educational research, it could also be argued that the relationship between politics and education is gaining particular popularity. Various international journals such as *Discourse: Studies in the Cultural Politics of Education*, *Journal of Education Policy*, and *Critical Studies in Education* confirm these trends in scholarly discussions. Furthermore, many critical theorists see themselves grounded in Paulo Freire's (1921–1997) work on the political nature of education, particularly made visible in his collection *The Politics of Education: Culture, Power and Liberation* (1985). However, the field of politics of education is highly diverse, often depending on a theoretical approach taken. Some go back to Plato, Aristotle, and Ancient Greek philosophies or find guidance from Enlightenment theories and the work of such scholars as John Locke (1632–1704), Jean-Jacques Rousseau (1712–1788), or Immanuel

Kant (1724–1804). Others might focus on more recent economic theories of Marxism, human capital theory, meritocracy, or philosophical movements of post-structuralism and postmodernism. The theories of Michel Foucault (1926–1984) and Pierre Bourdieu (1930–2002) are particularly widespread in contemporary perspectives on political nature of education. However, the differences in political research are not only limited to theoretical approaches taken, but they vary depending on the questions asked. Some educational studies explore macro-politics of education: educational politics and policy making at global and national levels. These studies tend to be interested in the ways in which political decisions and strategies are developed and how these could be improved. However, Simons et al. (2009a) also argue that educational research is increasingly shifting from macro questions related to economic and organizational theories to critical policy studies in which the focus turns to micro-politics of education inside and outside educational institutions. These researchers distance themselves from the kind of educational research that was aiming to improve existing policy mechanisms, and they rather examine policies and politics in relation to social context, power, and experiences (Simons et al. 2009a). In short, critical studies have brought educational research closer to micro-politics in which the political concepts of power, autonomy, freedom, and resistance receive increasing attention.

The key focus in studies on micro-politics of education lies on the question of democracy and educational formation of citizens. These studies are concern oriented and often confrontational to policies and politics that actively aim to reorganize schooling and education based on the market and managerialist practices (Simons et al. 2009a). Dating back to the end of 1970s and bound with the development of the critical orientation to education policy, studies on micro-politics of education tend to be driven by societal challenges such as globalization, managerialism, and neoliberalism (Simons et al. 2009b). Our own political research has explored these challenges and argued that the processes of neoliberalization and globalization are particularly evident in higher education contexts with the consequent de-professionalization of academic work, standardization of academic practices, and the marketization of higher education (see Olssen and Peters 2005; Raaper 2015; Raaper and Olssen 2015). It could therefore be argued that educational research on micro-politics is not directed in the first place toward policy but toward the purposes and operation of education and schooling. Scholars inspired by critical policy studies believe that education fulfills a fundamental role in ensuring democracy and democratic formation of citizens. From this perspective, it is not policy or State government that can "save" the society, but it is education that offers an opportunity for emancipation from oppressive policy mechanisms. Furthermore, most studies on micro-politics of education can be regarded as democratic acts in themselves; they are committed to education and society as vividly explained by Simons et al. (2009a, 31):

> The critical ethos is not in opposition to democracy, but is perhaps a way of living a democratic life, and a way to be concerned with or to be part of "the public and its education."

It could therefore be argued that the relationship between education and political theory is complex, and it varies across different dimensions: from macro-politics to micro-politics, as well as from ancient philosophies to contemporary theories of post-structuralism and postmodernism. These dimensions, however, cover a wide range of topics, theories, and theorists. This entry aims to map and introduce some of these political theories that are informing as well as transforming educational research. Furthermore, the entry guides the reader of this encyclopedia in exploring the relationship between education and political theory. We demonstrate the ways in which theories have informed recent scholarly work in education and our understanding of political concepts such as power, autonomy, identity, and resistance. The rest of this entry outlines a selection of entries included in this encyclopedia, creating an excellent starting point for anyone interested in educational research and political theory.

Theoretical Insights: From Ancient Theories to Postmodernism

The entry "▶ Mapping the Terrain of Political Theory in Education" by Jeff Stickney demonstrates the complex nature of political theory in education and its historic development from Plato's *Republic* (1991) and Ancient Greek philosophies to Enlightenment theories of John Locke, Jean-Jacques Rousseau, and Immanuel Kant, as well as to more recent work of political theorists such as Paulo Freire, Michel Foucault, and Pierre Bourdieu. However, Stickney does not promote a linear understanding of political theories in which one theory transforms into another – a progress from "combat to combat" toward universal reciprocity as Foucault (1977, 151) would critique it – but he relates these theories to various schools of thought such as founding theories, liberal analytic philosophy, and Hegelianism. Stickney also emphasizes the more recent political work in education, particularly the contribution of critical theorists such as Henry Giroux, Michael Apple, and Peter McLaren. We admit that our selection of entries below is not sufficient to cover the extensive map created by Stickney; however, the theories of social liberalism, meritocracy, and human capital as well as postmodernist and feminist approaches aim to provide some food for thought to anyone interested in exploring the political nature of education.

The entry "▶ Green, Public Education, and the Idea of Positive Freedom" by William Mace explores social liberalism in education and introduces the work of British idealist Thomas Hill Green (1836–1882). Green's contribution to public education and the idea of positive freedom cannot be underestimated. Inspired by Green's work, Mace explores the ways in which Green was influenced by earlier political thoughts of Ancient Greek philosophy as well as by the eighteenth century German idealists Georg Wilhelm Friedrich Hegel and Immanuel Kant. The entry highlights Green's response to the Industrial Revolution in nineteenth century and his understanding of education as a common good that requires State intervention and funding. Mace concludes by emphasizing the value of Green's theory to

contemporary understanding of education: education is central for good life, "and [this idea is] especially pertinent today, where rapid technological advances, transnational economic markets, and international terrorism, are again challenging traditional conceptions of freedom and opportunity".

The entry "▶ Meritocracy" by Ansgar Allen explores the legacy of Michael Young's dystopian essay "The Rise of the Meritocracy" (1958). Allen critically reviews the essay and highlights its relevance to contemporary educational debates. The entry argues that meritocracy is highly fluid and context-specific concept that depends on wider technologies of government. Allen argues that meritocracy as we experience it today is highly neoliberalized: it operates based on individual effort rather than on institutional intervention or social engineering proposed by Young (1958). Meritocracy for Allen is therefore "a descriptive term, and as an educational ideal, meritocracy exhibits remarkable, perhaps dangerous fluidity".

Like Allen's analysis on meritocracy, the entry "▶ Human Capital Theory in Education" by Donald Gillies questions the societal value of education. Gillies explores the work of Theodore Schultz (1902–1998) and Gary Becker (1930–2014) and argues that the human capital theory has transformed the ways in which we understand education: education has turned into an investment that is believed to produce individual value as well as to increase the quality of economic workforce. Gillies brings examples from the Organization for Economic Cooperation and Development and the European Union policy developments and argues that "Human Capital Theory has become one of the most powerful underpinnings of education policy discourses worldwide". The entry critiques this narrow understanding of education and the impact it has on schools, learners, and teachers. Gillies also questions the economic significance of the theory and argues that human capital theory does not produce clear economic value to justify its popularity.

Shifting toward postmodernist theories, the entry "▶ Foucault, Confession, and Education" by Andreas Fejes explores the work of Michel Foucault (1926–1984) in relation to contemporary confession culture in education. Fejes provides a

genealogical overview of confessional practices from Ancient Greek culture to Medieval Europe and modern societies. Contextualized in the past, Fejes argues that confessional practices today are understood as productive forces necessary for ensuring productivity of education, learning, and societies. More specifically, confessional practices (as these become evident from various assessment technologies) make "the innermost thoughts of the learner available for correction". Guided by a Foucauldian theorization, Fejes critiques that confessional practices in education allow subjectification and normalization of students: they create specific types of subjects who can be corrected and normalized. Fejes encourages educational researchers and practitioners to explore these often hidden confessional practices in education.

Putting Theory into Practice: Examples of Educational Research

The selection of entries below aims to demonstrate the ways in which particular theories can inform educational research and our theorization of political concepts such as educational leadership, inequality, citizenship, inclusion, and autonomy. The entry "▶ Feminist Theories and Gender Inequalities: Headteachers, Staff, and Children" by Kay Fuller explores feminist theories in relation to gender inequalities and school leadership. Fuller introduces the four historic waves of feminist theories: from suffragette movement in nineteenth century to the fourth wave located in twenty-first-century political concerns of sex work, transgenderism, and social media. However, Fuller also argues that each wave has something to offer to contemporary understanding of gender inequalities. Fuller explains her view by introducing the research project on headteachers' understandings of diversity among school populations in the UK. By drawing on the examples of headteachers Isabella and Katherine, Fuller argues that a single feminist theory is insufficient to explain the contemporary "nuances and complexities of gender as it is socially constructed".

Dina Kiwan theorizes the concept of "citizenship" in the entry "▶ Citizenship, Inclusion, and Education." Guided by a wide range of political theories, Kiwan argues that "the concept of citizenship is a highly contested one; one which has been contested throughout its intellectual history." Like many other authors in the field, Kiwan goes back to Ancient Greek philosophy and explains the ways in which the early Greeks understood citizenship as a relationship between a person and the city-State or "polis." Kiwan also traces the understanding of the concept in feudal Europe and in the work of Thomas Hobbes, Jean-Jacques Rousseau, and John Locke. The entry finishes by exploring contemporary challenges around inclusion and citizenship, particularly in educational settings. Kiwan argues that there are multiple understandings of citizenship that draw on various educational approaches: "moral," "legal," "participatory," and "identity-based" conceptions of citizenship. However, the entry also notes that Western liberal democracies tend to rely on participatory transformative pedagogies when promoting inclusion.

The entry "▶ Universities and the Politics of Autonomy" by Mark Murphy explores more recent issues of academic freedom, academic identity, and institutional democracy in higher education settings. Murphy draws on critical theory and explains that "political debates concerning the university are numerous and usually rancorous". The entry argues that highly popular Foucauldian and Marxist theories in university studies might not be sufficient to portray an adequate picture of contemporary university politics and processes. Murphy argues that the scholarly debate requires a more nuanced account of institutional autonomy in which the question of how do universities balance the competing demands for autonomy and control becomes the key focus of the critique and discussion.

Cristina Costa and Mark Murphy continue with the focus on university practices in the entry "▶ Digital Scholarship: Recognizing New Practices in Academia." Costa and Murphy apply Pierre Bourdieu's (1930–2002) theory of practice and Axel Honneth's (born 1949) work on recognition and identity to explore the implications

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digital practices have on academic profession. The authors theorize the web as "a new alternative space where intellectual work can be discussed, published and made openly available to a wide range of communities". The authors demonstrate the ways in which two theoretical perspectives can complement each other when theorizing digital scholarship and the struggle for recognition. By using the work of Bourdieu and Honneth, the authors argue that changing academic identities should be seen within an intersection of different forms of power and recognition that relate to structural transformations as well as to emotionally charged workplaces.

Conclusion

As the work of various academics demonstrates, the relationship between education and political theory is widespread and complex. Educational researchers and practitioners can be guided by a variety of theories and theorists when exploring a wide range of educational topics and issues. One thing is certain, the use of political theory in education is gaining increasing popularity and scholarly attention. This is possibly because political theories allow us to question the role of education in wider society, particularly when the society is facing major material crises such as population growth, climate change, nuclear, and other forms of terrorism, economic recession along with more recent refugee crisis, and mass migration from developing countries. Therefore, the political issues in education such as power, the purposes of education, citizenship and inclusion, and educational and gender inequalities among many other concerns require increasing scholarly attention. We hope that the overview above provides guidance and food for thought to anyone interested in exploring the political nature of education.

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Education and Youth Protests

Education for All

Education for Citizenship

Education for Sustainability

Education for Sustainable Development

Education History

Educational Administration and Management

Educational Administration and the Inequality of School Achievement

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Introduction

One of the biggest and most pressing educational problems confronting many countries around the world today is the inequality of school achievement. Although the problem has long been with us, in recent times, it has become far more transparent through the use of international measurements such as the Progress in International Reading Literacy Study (PIRLS), Trends in International Mathematics and Science Study (TIMMS), and especially OECD's Programme for International Student Assessment (PISA). All three report their 3- or 5-year findings in ways which not only rank the performance of the participants from top to bottom, above and below a central standard (e.g., a score of 500) but also identify the range of scores within individual countries between the highest and lowest achievers. Some nations rank consistently well or poorly, while others rise and fall in the rankings; some countries have a very narrow range of scores between top and bottom students, while others have a very wide distribution. For many countries, the range of scores are distributed in ways which reveal that certain groups of children perform well, while other groups of children do not; in countries such as Australia, Canada, New Zealand, the United Kingdom, and the United States, white/Asian/middle-class children tend to do well, while brown/indigenous/immigrant/working-class children tend to do less well. The data, although not beyond justified criticism, does point to some uncomfortable conclusions about differences in school achievement which reflect underlying social inequalities.

What to do about the inequality of school achievement in countries where it exists to any

significant extent is something which continues to exercise politicians, policy makers, teachers, and commentators, especially when a new set of results is made public. One country has become so concerned about the problem that the Minister of Education not only established a Ministerial Cross-Sector Forum on Raising Achievement but also took a document to Cabinet seeking support for a new initiative, Investing in Educational Success:

> New Zealand has an achievement challenge. Our top students are doing as well as students anywhere in the world, but there is a big gap between our top performing students and those who are not doing so well. International studies also tell us that we are not keeping pace with other high performing countries and jurisdictions and are falling short of our own previous results. We must do better and raise the quality of learning and achievement across the board. Doing this requires whole of system improvement. (Parata 2014, s4)

The document continues:

> Evidence demonstrates that investing in the profession by raising the quality of teaching and leadership provides the best opportunity to deliver the improved educational outcomes we seek. (Parata 2014, s5)

This captures the problem various countries face.

Addressing the achievement challenge requires two things: explanations which causally account for the inequality and solutions which can have a significant impact on the causes. Given the search for a "whole of system improvement" then educational administration looms large. And never far away from it all lurk philosophical problems. Surprisingly, however, this is an issue which attracts very little philosophical attention, partly because of the scope of the achievement challenge. To be sure, much has been written on discrete elements of the issue (e.g., equality, learning, causal factors, educational administration), but these tend to be treated in isolation rather than connected as part of a coherent and systematic whole. Consequently, there is a dearth of philosophical literature which explores the matter from first to last.

Achievement: Education or School?

Facing up to the achievement challenge depends very much on what sort of achievement is being considered. Sometimes it is cast as educational achievement (Snook and O'Neill 2010, 2014) but this seems to spread the achievement net too wide when education is conceived in the broadest of terms as the qualities of an educated person. Making any progress on this account of achievement would be overly ambitious, even though highly desirable. A narrower definition of achievement, restricted to school learning of the kind which can be measured in some meaningful way, as with PIRLS, PISA, and TIMSS, has the advantage of greater empirical precision but does come at the cost of capturing a very limited range of what students have learned and can do which may not always be to their advantage.

Difference and Equality

Differences are one thing; inequalities are another. Differences abound, in schools no less than other social institutions, but not all differences amount to inequalities. Differences in hair color, when it comes to school achievement, count for nothing. But when differences in school achievement are along, for example, class, ethnicity, or gender lines, then equality comes into consideration, and conceptual trouble enters. Winter (2010) defines the "attainment gap" as "the inequalities in schools in terms of educational outcome between learners with different backgrounds and capabilities" and considers it important because "benefits accruing from an education are substantial and where such a gap exists, it leads to large disparities in the quality of life many young people can expect to experience in the future" (pp. 276–277). She makes reference to "equal educational opportunity," this being the idea that "every learner should have equal access to an equally good education, requiring on most accounts, the same allocation of educational resources" (p. 277). This requires some refining.

Equality of Access or Opportunity

In a very simple sense, equality of opportunity entails that all are permitted to step up to the starting line and enter the race, so to speak. No one is denied the opportunity of entering but this is about as far as equality of access takes us. Beyond this, future achievement or success is very much a matter of personal effort coupled with a measure of good luck. The problem is that initial inequality is maintained, even exacerbated rather than diminished.

Equality of Treatment

If unequals are treated equally, then it is clear that the initial inequality will be maintained and possibly, in practice, widened. This would be manifestly unjust if the original state of inequality was unjust. It seems reasonable to treat unequals unequally on the understanding that unequal treatment must be to the advantage of the least advantaged child if a measure of equality is to be obtained.

Equality of Outcomes

If unequal treatment is to be justified, it must be on the grounds of achieving some end state such as the equality of outcomes cashed up as the life chances all children should enjoy which neither significantly advantages nor disadvantages them by virtue of their gender, social standing, economic wealth, health status, religious conviction, political status, or right to human happiness.

A Simple Model

A simple (and perhaps simplistic but nonetheless useful) model helps to understand the various parts of the problem and how they connect, albeit in complex ways:

Inputs − Process − Outputs − Outcomes.

Outputs: Where things begin, being that which children produce as a result of learning – their performances in, for example, PIRLS, PISA, and TIMSS.

Outcomes: The sorts of lives children will live in the future when adults which will be marked by differences in health, wealth, housing, status, influence, longevity, and the like. Philosophers have had much to say, too much to list here, about the aims and ends of education, of living a good life, of being life-long learners, of being good citizens, and the nature of a good society.

Process: Learning lies at the very heart of the inequality of school achievement – the external world is experienced through our senses (as inputs) and captured in learning, while the outputs are produced from learning stored in memory.

Inputs: From the stimulation of our senses, we posit things beyond us, in the world, to account for the sensory experiences. So is built our theory of the world, of what exists, and it is from this that we begin to explain what we learn and how we learn.

Causes

Addressing the achievement challenge requires careful consideration of the causes of and solutions to the inequality of school achievement. One of the most detailed analyses of the inequalities in school achievement is to be found in the collected work of Nash (2010) who provides a painstaking realist account of a very wide range of causal factors. Another is Reardon (2011). However, all too often the issue is framed by the within/beyond school dualism: within-school factors include teacher and leadership quality, curriculum and assessment, school learning environments, and various reform initiatives such as charter schools, while beyond school factors include family circumstances (income, health, housing, neighborhood), employment conditions (business decisions), and government policies (taxation, revenue distribution). However, the distinction is flawed.

Snook and O'Neill (2010) examine the within/beyond school distinction in some detail. They point out that there is both a strong relationship

between home background and educational achievement and that teachers can make a difference to student achievement. What is at stake, however, is the relative weight to be given to the two sets of factors. They make some important observations: (1) consideration must be given to both the broad social patterns at the macrolevel of analysis and specific individual lives at the microlevel if a full account is to be given of why it is that many children in poverty underachieve, but not all, and why some children underachieve when not impoverished, and (2) although the focus is on the mechanisms of social class which generate the inequality of school achievement, this may lead to identification of "broader social and economic policy that also need to be changed" (p. 12). They conclude that radical changes to schooling have a limited effect on achievement inequality, and while schools can make a difference, this is not enough.

The within/beyond distinction, largely accepted by Snook and O'Neill, comes in for criticism from Brighouse and Schouten (2011) who identify some problems with the dichotomy. They argue that while some important factors fall neatly into one side of the dualism or the other, others do not: some fit neatly into neither category, and others seem to fit into both. An example they give of the latter is the lengthening of the school day and year which is clearly a within-school initiative but is also a neighborhood-changing reform impacting on parents where their longer periods of employment can earn them more money and their children have less time for risky activities. They conclude "...because many policy and practical interventions influence what happens both within and outside the school, the dichotomy does not help" (p. 508). But they offer no alternative theoretical conception.

Clark (2011) does. He rejects the dualism, advancing instead a proximal/distal continuum as a more powerful explanatory account of causal factors. The proximal (closest to the action) grade off to the distal edge. The proximal need not be the most powerful explanatory factors and the distal least so. Some furthest out may be some of the most important causal mechanisms. All relevant factors range across the continuum with weightings distributed where they fall, varying from one student to the next within the general class of all students. This would allow for fine-grained explanations of individual student achievement contained within larger groups of differentiated achievement.

Deficit Theory

The extension beyond within-school measures to include beyond school factors means, as Nash (2010) made plain, fronting up to the charge of "deficit theory" leveled against those who seek causal explanations in families and communities rather than in schools. Deficits, in a descriptive sense, arise when something is lacking which is needed in order to proceed to something else. If a new entrant child lacks some prior learning (phonic awareness) required for more advanced learning (competent reader), then there is a learning deficit, and this is an empirical matter. So too is the cause of the deficit, usually located in the home such as parental illiteracy which itself may be a causal consequence of factors further out in the distal past (low parental school achievement in a climate of poverty and unemployment). Intervention with remedial programs in the school can go some way to alleviating the deficit, but not all the way. More is required well beyond the school.

The charge of "deficit theory," however, often carries with it a pejorative element that those who locate the causes of inequality in the family and community are also laying blame on parents and communities for the deficit, when the culpability really lies with schools. But moral responsibility is inescapable for it is human conduct which creates the policies and distributes the resources which generate and reproduce the inequalities. It is easy with the within/beyond school dualism to apportion blame such that all of it is attached to teachers and principals and none on politicians and educational administrators, but the proximal/distal continuum places blame where it may fall, be it the waywardness of the child, the neglect of the parents, the poverty of the community, the policies of governments, or their implementation

by officials. In short, this is not to blame the victim, the child, but to hold to account all those in the causal chain deemed culpable and, giving due weight to each, hold them all variously responsible for what they have done and what they could do.

Learning

Learning lies at the very heart of the inequality of school achievement. What children learn (inputs) and remember becomes important at some other time (sooner or later) when they informally (response to a teacher's question) or formally (PISA) demonstrate the extent of their learning. An important distinction comes into play – the etiological and the constitutive, with the senses being the boundary. The former are all those factors which fall along the proximal/distal continuum, for it is they which bear directly on experience and are learned, remembered, and forgotten, drawn upon to display learning (outputs) which impacts on the outcomes where they too are located in the etiological. The constitutive is where learning takes place, and here things get philosophically murky. Davis (2004), for example, is critical of brain-based learning, advocating instead an explanation of learning in terms of mental states (intentional ones about real things) and propositional attitudes, or the attitudes we have towards propositions (e.g., hope, wish, believe). Others are more sympathetic to the claims of neuroscience. Schrag (2013) is one such. He offers a reasonably balanced view of the strengths and weaknesses of neuroscience for teachers. Neuroscience may do better at explaining learning as a neural activity which on occasions may generate new findings which feed into decisions about enhancing learning. It is more unlikely that neuroscience will make new classroom pedagogies available to teachers. In short, neuroscience is strong on explanations of learning which contribute to the background information teachers draw upon to make practical decisions about learning and teaching but on its own it has much less to offer by way of practical interventions which can improve teaching practice to

effect raised student achievement. Yet all is not lost for neuroscience and brain-based theories of learning, as the use of cognitive enhancers (medicines such as those used with Alzheimer's patients being taken by students to improve their short-term memory in high-stakes assessments) indicates.

Solutions

All too often, the policy initiatives proposed, and sometimes implemented, are disconnected from the causes and so fail to do the work required of them. It is noticeable how "solutions" come and go while the achievement challenge remains because the interventions do not home in on the causes of the inequality (Brighouse and Schouten 2011; Snook and O'Neill 2010). The reason for this has much to do with the stranglehold that the within/beyond school dualism has on thinking about the inequality of school achievement. It is easier for politicians and policy makers if solutions are restricted to the within-school variety for responsibility can then be placed firmly on schools and their teachers to be held accountable for the success or failure of their students. Interventions take various forms, for example, curriculum reform (Winter 2014), new types of schools (charter schools), behavioral change programs, innovative learning environments (flexible, digitally based, open-plan classrooms), school-based initial teacher preparation courses, in-service workshops to raise teaching and leadership quality, and the like. Like the pillars of ancient Greek temples, each initiative stands in isolation, disconnected from the rest so there is no coherent and unified strategic approach.

A better way to proceed is to adopt the idea of a web where all the parts are interconnected. Initiatives right across the board form a seamless whole, ranging from those which have a distinct school flavor (such as those above) to those far removed from schools but which impact so significantly on the inequality of school achievement (government policies and resource provision in such things as health, employment, welfare, job training, and the like). If the State is to successfully address the

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inequality of school achievement, then it must address the wider inequality embedded deeply in the social fabric of society.

Administrative Action

What are educational administrators at the national level to do if they are to introduce systems-level interventions designed to significantly reduce the glaring and growing inequalities in school achievement of a nation State? A very clear message has emerged, early and late. Evers (1993) observed that administration includes "a grasp of the politics necessary for understanding what is required for implementation" (p. 259), while more recently Snook and O'Neill (2014) argue that "There must also be changes in the wider community and this will require changes in social and economic policy" (p. 38) which include but are not limited to parental support and the enhancement of family and community well-being. And it is here where educational administrators come face to face with an unwelcome reality:

> The widespread acceptance of the essentially political view that the educational system is responsible...for social disparities in achievement makes it unnecessary in certain respects to develop an account of the mechanisms that actually generate the inequalities it fails to correct. If the initial disparity is actually rooted in home resources and practices, then...the implications for educational policy are minimal. (Nash 2010, p. 256)

If educational administrators at the national level are to confront the achievement challenge, then they face their own achievement challenge when it comes to whole of system improvement designed to redress the problem of the inequality of school achievement.

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Educational Aims and Reforms of Science Education

▶ Philosophy of Education and Science Education

Educational Change/Reform and Norms

▶ Unmaking the Work of Pedagogy Through Deleuze and Guattari

Educational Leadership as a Political Enterprise

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Synonyms

Administration; Education; Equity; Leadership; Politics

Introduction

Educational leadership is a political enterprise. Scholars in the field first acknowledged the political nature of educational leadership around the middle of the twentieth century. Since that time the study of politics in education has expanded and flourished, becoming a staple of inquiry in leadership and educational administration studies. Not all scholars, however, approach the study of politics in the same way; the manner in which they explore this realm is associated with the meaning they attribute to politics and the research traditions with which they identify. This entry explores how scholars have approached the political aspect of educational leadership over the years. It reviews the various traditions, the meanings associated with them, and the research on politics and leadership that they have generated.

Politics in Education

Inquiry into leadership has a long and varied history. While scholars have focused most of their attention on individual leadership, they have also acknowledged the collective side of leadership, that is, group and institutional action that influences what happens in organizations and beyond. Scholars have also explored leadership in education, including its political aspects. But inquiry into leadership and politics has a decidedly shorter life span than research into politics

generally. This is due, in part, to the belief in much of the Western world that education is, or at least should be, an apolitical enterprise. This belief took shape as a response to the excessive presence of politics in educational institutions of the past.

At the beginning of the twentieth century, reformers sought to put an end to the abuses associated with political interference in school systems, by introducing reforms that would leave education to the professionals and keep it away from politicians. For a period of time, many believed that these changes removed education from politics. Academics bought into this apolitical myth, seeing little need to explore politics in education where none existed. It was not until the mid-twentieth century that scholars began to recognize that the education system and the leadership that governed it was indeed political. They acknowledged that the earlier reforms had merely exchanged one type of politics for another; politics were still present, but they took on another form (Scribner and Englert (1977). The first significant move toward acknowledging and studying politics in education was the work of Elliot (1959).

A field of educational politics eventually grew out of Elliot's efforts. Its initial focus revolved around government- or State-related activities. In time, however, it expanded its horizons to more informal and less legal-centered phenomena. Even so, the meaning of politics was contested and continues so even to this day. One "definition" that many who studied politics agreed upon, however, was as practices associated with "who gets what, when and where" (Laswell 1936). Another way of putting this, as a number of scholars who studied educational politics did, was as "the set of interactions that influence and shape the authoritative allocation of values" (Scribner and Englert 1977). Both of these definitions highlight the distribution processes in communities and schools. As subunits of State government, educational jurisdictions and leaders have the authority to allocate values and can influence the process and outcomes. In this sense they are engaged in political activity.

Over the years, scholars have attempted to categorize the various approaches to politics in a number of ways (e.g., Scribner et al. 2003). The categories they proposed, however, were contestable and, in practice, often overlapped. For the purposes of this entry, three idea are identified. Two of these approaches – systems and micropolitics – emerged from what has come to be known as the field of educational politics; the other, equity politics, has taken a different route, although more recently scholars have associated it with the politics of education field (e.g., Cooper et al. 2008). Each of these perspectives approaches politics – the allocation of values – in a different way, and each is associated with a research tradition that shapes the purposes of scholars' inquiries, the manner in which they understand politics, and the ways in which they inquire into them.

Systems Politics

The first studies in education politics took place in the mid-1900s, and they provided the basis for the field of the same name. Many of these inquiries took their lead from the longer-standing discipline of political science. The preoccupation with science at the time was firmly entrenched not just in research into politics but also inquiry in other social domains, like education. Most academics believed that in order to generate authentic knowledge of social phenomena, scholars had to explore the terrain as a science. This was as true for the discipline of educational administration and leadership as it was for most other areas in education. In the struggle to ensure the legitimacy of this form of (social) science, scholars adopted the methods, frameworks, and theories used by the physical sciences and techniques that they believed would allow them to distance themselves from the social phenomena that they were studying and convey in neutral terms accounts of an objective social world. Adherence to these procedures would supposedly allow them to generate generalizable laws that could explain and predict human behavior.

Positivist approaches were attractive for more than just legitimacy reasons; scholars also believed that they could provide social engineers, including leaders, with the keys to control their respective social or physical domains. In order for

them to do this though, social scholars had to integrate functionalist/systems theories into their inquiries. These theories allowed scholars to isolate and measure the relationships of important elements/variables. Information about these relationships could then be relayed to leaders who could use this knowledge to predict the outcome of their actions. This ability to predict the future was predicated on the not-always-acknowledged assumption that human beings were more or less determined by their circumstances and had little choice but to respond to the stimuli that leaders and others initiated.

Like many other social science disciplines of the time, educational politics embraced systems theories and positivism. Systems theories were particularly influential in this regard. In fact the institutions on which political scholars focused actually became known as (political) *systems*. This had two consequences for the study of politics in education; it had an impact on what was studied and how it was studied. This systems approach dictated that research into educational politics focused on institutions rather than individuals as systems were to be found at an organizational rather than an individual level. And so scholars concentrated on large-scale politics including government processes and educational institutions. They studied conflict, struggles for power, pressure group activities, government institutions, structures and actions, policy and policy making, influence attempts, decision making, political parties, and voting behavior. These researchers did not question the allocation processes associated with these phenomena or who benefited from them; they simply took for granted the neutrality of these processes.

The adoption of systems theories also influenced the way in which scholars studied educational politics. Researchers considered educational institutions as if they were systems. For example, many looked at how inputs (demands, supports) were converted (through a political system) into outputs (e.g., authoritative decisions) which resulted in certain kinds of outcomes (e.g., consequences of the decision) that in turn fed back into the political system as new demands or supports (Scribner and Englert 1977). Scholars

routinely measured relationships between power structures and educational decisions, the impact of community contexts on political processes, and the effects of political and economic inputs upon policy outputs. While some employed case studies, most employed surveys and quantitative analyses to confirm these and many other causal links.

The first researchers to study politics in education, then, saw politics as institutional phenomena that could best be studied by employing systems frameworks and positivist methods. Subsequent approaches to politics challenged this position. The first that emerged came to be known as micropolitics.

Micropolitics

Micropolitical approaches first emerged in the 1970s and were prevalent in the 1980s and 1990s. Although they varied, most differed from systems approaches in a number of ways. While system theorists concentrated on institutional phenomena, micropolitical scholars studied the actions and interactions of educators, often within schools. This approach was made possible by changing trends in forms of inquiry. After many years of positivist domination, the field of educational administration and leadership embraced, slowly at first, other theories of organization and methods of inquiry, following the lead of social scientists in other disciplines. In doing so, they paved the way for different ways of understanding educational organizations, leadership, and politics.

The research tradition that first challenged the systems approach in educational leadership studies was known as subjectivism. Much of the subjectivist criticism of systems/quantitative inquiry targeted the assumptions on which these latter approaches rested. Thom Greenfield (Greenfield and Ribbins 1993) was perhaps the most articulate advocate of subjectivism in educational administration and leadership. Greenfield claimed that organizations were individual constructions originating in the minds of people. For him, people were not in organizations; organizations were in

people. In marked contrast to the systems/positivist approach, organizations were constructed entities, the product of the perceptions, wills, and values of the people who worked and learned in them. Students, teachers, administrators, and trustees interpreted what they saw about them, often in very different ways, and then acted on the basis of these interpretations. Unlike the automatons of the systems/positivist world, these individuals could decide for themselves what they wanted to do.

The idea that the willful perceptions and values of people shaped organizations seriously undercut the possibility of establishing causal relationships in organizations. If people were responsible for making the organizations of which they were a part, capable of deciding for themselves what they wanted to do, and thus unpredictable, how could one reasonably establish causal relationships in organizations? Critics like Greenfield argued that people did not obey general laws, but simply did what they felt like doing. The conclusion that he and others reached was these input/output system models, attractive as they were to those seeking control of their organizations, did not adequately depict the world in which educational leaders worked. This subjectivist view also ushered in another, perhaps more realistic way of seeing and studying organizations and leadership. If organizations were constructed by people, then tapping into their perceptions and experiences could reveal what really happens in these places. While these methods might not generate the useful (yet illusory) generalizations that systems advocates sought, they could nevertheless provide useful insights into practice.

Motivated by a desire to compensate for the shortcomings of the systems approach and a wish to explain the failure of current reforms, these academics looked for politics not at an institutional level, but within schools. While not denying that politics existed at a systems level, they nevertheless sought to understand how allocation processes played out on an interactional level within educational institutions – in what people felt, said, and did. Unlike systems scholars, they assumed that these organizations were conflicted entities, populated by people who employed power to promote their own interests. Those who explored politics from a microperspective painted pictures of organizational life from which leaders could learn. Unlike systems scholars, some researchers specifically studied individual (school) leaders – how they used power to realize their interests and influence the way in which values were allocated in their institutions.

Micropolitical approaches differed from systems politics in two key ways. Shunning methods that sought to establish causal relationships and predictability, they attempted to illuminate allocation processes within schools by revealing how they worked on the ground, in the daily grind, and in the thoughts, words, and actions of the people involved. Although they acknowledged the impossibility of achieving objectivity in their studies, they nevertheless sought to distance themselves from these political practices, neither questioning these processes nor advocating for particular practices. Another way in which they distinguished themselves from systems researchers was in the role they attributed to individuals. Microresearchers looked at micropolitical practices through an individualistic lens; they assumed that individuals or groups of individuals, not processes or structures, were responsible for shaping allocation practices. Unlike systems scholars, they assumed that power, interests, and conflict were largely individual products. Advocates of yet a third approach to politics would react critically to this undue emphasis on individuals and an implicit endorsement of allocation processes in schools.

Equity Politics

A third approach to politics in education focused on the fairness of the allocation process. In education, this view of politics was the last to emerge, although it is somewhat puzzling that it did not appear earlier, given its explicit focus on distribution. This perspective draws on a long history of ideas about critique and fairness. Central to this tradition is Marx who drew attention to the inherent unfairness in the quickly expanding nineteenth-century capitalist production system.

One of his fundamental conclusions was that a few benefit from social arrangements that penalize many others. Subsequently other scholars, most notably those associated with the Frankfurt School, broadened Marx's critique, targeting, among other things, rationality and positivism. Scholars in education eventually embraced a number of these ideas, including a critique of current social structures and a desire to engender change.

In contrast to systems and micropolitical approaches that implicitly and explicitly endorsed the current distribution of values in educational organizations, equity scholars questioned the manner in which these processes occurred. They believed, first and foremost, that these processes were unfair and that inequities occurred systematically both within organizations and communities. The result was that some groups were persistently, consistently, and systematically marginalized, while others continued to enjoy privileges. Unlike Marx who concentrated exclusively on social class, though, scholars in education illustrated that these unfair practices also cut across gender, race, sexual orientation, and many other structures of opportunity.

The first scholars to introduce these ideas to education drew on Marx and the Frankfurt School and others like Freire and Dewey. They emphasized that education played a crucial role in the generation of wider inequities that were the product of wider systemic structures. A particularly influential early inquiry by Bowles and Gintis (1976) provided a wealth of empirical data that demonstrated that the education system both reflected and reproduced wider inequalities. Other scholars (e.g., Giroux 1983), however, took issue with this overly deterministic approach. They maintained instead that these inequalities played out in more intentional and subtle ways in the day-to-day interactions in schools. Policies and practices generated unique cultures where taken for granted practices – such as the hidden curriculum – provided advantages for some students at the expense of others. As a result already-marginalized students continued to be disadvantaged, while the privileged continued to benefit from the system.

It was not until the 1980s that scholars in educational administration and leadership imported these views. Drawing on sociology of knowledge and Frankfurt School ideas, scholars (e.g., Bates 1980) exposed the inequities associated with management and leadership practices. In doing so, they both critiqued current approaches to inquiry in leadership and advocated for change. Among other things, they demonstrated how the research at the time – positivist, postpositivist, and subjectivist – was not neutral, but worked to prop up leadership practices that sustained an inequitable status quo. Others identified leadership practices that generated equity in educational organizations. Operating under the social justice leadership banner, these scholars both critiqued the idea that leadership practices are naturally neutral and fair and studied leaders who promoted equity, inclusion, and social justice.

Only recently has equity politics been embraced as a legitimate part of the field of educational politics. The first substantive offering appeared as part of a Politics of Education Yearbook (Marshall 1991), and the chapters were described as representing the new politics of race and gender. Other articles, book chapters, special issue journals, and edited books have followed. They have explicitly targeted the allocation of value processes in education, educational administration, and leadership. They have explored issues of school finance, segregation and desegregation, school services, gifted students, and urban governance. These and other scholars make the point that many school policies, and, in particular, recent reform efforts are not neutral, but highly political and value laden, often obscuring race, class, and gender inequalities (Cooper et al. 2008)

Conclusion

To this day, political inquiries continue to be a staple of research in the field of educational leadership and administration. The research traditions that provided the foundation for systems, micro-, and equity political approaches still guide these inquiries, although contemporary approaches continue to develop and transform. Whatever the approach, it is evident that

scholars have come to acknowledge the place and importance of politics in educational leadership in education.

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Educational Leadership as Critical Practice

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Synonyms

Critical practice; Critical scholarship; Educational leadership; Social interaction; Theory/practice divide

Introduction

The aim of this entry is to introduce the turn to practice in the social sciences that has occurred in recent years and examine how and why this turn has been taken up by scholars in the field of educational leadership. This entry outlines major trends in emergent scholarship which adopt a "critical" approach to educational leadership as a form of practice, that is, one which embraces an explicitly political, humanistic, and transformative agenda in its theorization of practice. It examines the different approaches to theorizing educational leadership as practice drawing on recent developments in practice theory and philosophy that have emerged in the field as a result of this turn, including practice scholars such as Pierre Bourdieu, Michel Foucault, and Theodore Schatzki. This entry summarizes the key contributions that a critical practice approach has made to the field and concludes with possible future directions for this trajectory.

Turn to Practice

In the past two decades, there has been a turn to practice in the social sciences as an alternative way of understanding the social world. This "practice turn" (Schatzki 2001) has renewed interest in what might appear at first glance to be ubiquitous and often overlooked, taken-for-granted phenomena underlying human life and social interaction – the everyday practices of human beings. One of the major reasons for this resurgence of interest in practice are attempts by social scientists and philosophers to move fields of research beyond the dualisms that still characterize much Western thinking, for instance, mind/body, theory/practice, objectivity/subjectivity, logic/emotion, individual/society, and masculine/feminine. The thinking underlying this practice in turn rejects notions of external social structures and systems framing social interaction and derives from a range of fields, most particularly the field of philosophy and thinkers such as Martin Heidegger and Ludwig Wittgenstein.

Practice theorists are drawn from a wide range of disciplines and constitute a broad array of understandings and conceptualizations of what they mean by practice. However, practice approaches to the social world are characterized by some central and shared understandings. A key feature of practice accounts is that they accord primacy to the everyday practices in which humans engage as a fundamental part of daily lives. They view the social world as made up of practices and utilize practices as their fundamental unit of analysis. This is in contrast to analyses which afford primacy to individuals' accounts of the social world – that is, social phenomena are constructed by the thinking and conceptualizing of the sovereign individual.

These practice accounts are in contrast to analyses which view the social world as composed of social structures and systems – which shape power relations between human beings. Moreover, practice approaches reject the rationalism – the commitment to a form of technical reasoning – that underpins modernity, as encapsulated in the Cartesian binary of the mind/body. As feminists have noted, such dualisms and forms of reasoning privilege particular forms of knowledge and ways of understanding the world. For instance, dominant discourses of leadership and management as rational, orderly, and linear processes reify forms of knowledge that are traditionally associated with constructions of (white) masculinity. This privileging locates critical and practice-based theorizing of leadership, which examines leadership as embodied, gendered, classed, racialized practices, composed of non-propositional knowledge and tacit understandings – as "other" to these dominant paradigms.

Practice approaches represent what has been termed a practical ontology, rooted in the intelligibility of practices. In order for humans to make sense of our social world, we are crucially reliant on *shared* understandings of how to go on in this world. This practical intelligibility allows us collectively to make sense of, function in, and potentially transform the world in which we live. The centrality of everyday practices as described switches the researchers' gaze from a functionalist and systems perspective – where the world is apprehended via objectified systems and structures, or from an individualistic cognition perspective – to one where the world is apprehended from the perspective of the individual acquiring knowledge and understanding.

For sociologists such as Pierre Bourdieu or Anthony Giddens, a practice approach to understanding the social world assists theorists in transcending traditional social science divisions in which human activity is constructed as a dialectical interplay between individual human agency versus external social structures. For philosophers and literary theorists such as Michel Foucault and Jean-Francois Lyotard, understanding language as practice means reconceptualizing it as a "discursive activity" (Schatzki 2001, p. 10) of shared meaning-making made possible through people using and mastering the language. Mastering and employing a language is not an individual property, nor does language correspond to an external social structure or system. Rather, language and learning a language is a collective social phenomenon that shapes our social world. As a social phenomenon, it is thus steeped in and productive of power relations – to enter a discourse means learning what forms of knowledge and knowing are valued and foregrounded and, implicitly, which forms of knowledge are marginalized.

The centrality of practice to our social world is a key assumption that underpins more recent *critical* approaches to understanding educational leadership as a collective social phenomenon. A practice approach to educational leadership that adopts a critical lens views leadership as constructed by discursive understandings and forms of knowledge about this thing called "leadership." It constructs leadership as a set of social practices which compose our understandings, know-how, and relationships with other human beings with whom we interact in the practice and in the material world in which the practice is enmeshed. Critical approaches to educational leadership posit leadership practice as invariably an effect, and productive of, power relations and as inherently political – situated in civil society

and the institutions which compose that society. It is to how and why this approach has been taken up in educational leadership that we now turn.

The Emergence of Critical Approaches to Educational Leadership

Educational leadership as a field has been critiqued for its uncritical borrowing from the sciences and management, beset with questions of its legitimacy and dominated by a positivist approach in which researchers attempted to establish the field as a scientific discipline in its own right. The field has tended to be dominated by individual agency/structure and systems dualisms as a means of understanding the social world of educational organizations and their performance. Individualizing approaches to understanding the phenomenon of educational leadership and the performance of educational organizations such as schools have drawn on the "great man" theories of leadership. These theories predominantly valorized the traits of (male, white) individuals. More recently, notions of the individual, heroic transformational leader have been utilized as explanatory lens for why some schools may be more effective in their outcomes than others. The valorization of leaders and leadership has become a dominant tendency in the past two decades, supplanting an earlier dominant systems tendency in which educational institutions were viewed as part of complex systems, and educational leaders as the role incumbents in organizations. Thus a focus on systems as an external organizer of human practice became the main explanation for a school's (or other educational organization's) performance.

As part of an endeavor to establish itself as a science, educational administration scholars drew on technical and functionalist approaches to administration, in order to produce generalizations about schools as organizations. Post World War II, systems theory became a particularly popular explanatory lens by which the functioning of schools could be conceptualized. Schools as organizations were theorized as complex social systems composed of interrelating and interdependent sets of activities in which the formal role of educational leaders was but one aspect of the organization's functioning, albeit an important one. The search for "law-like generalisations" (Evers and Lakomski 2012, p. 60) about the shared characteristics of educational leadership was premised on the belief that the structure and organization of schools could be controlled and predicted through scientific methods. This endeavor for prediction can still be seen in the many current attempts to produce Principal Standards that characterize many contemporary education systems in Anglophone nations.

Thomas Greenfield's arguments in the 1970s for subjectivist and humanist approaches to the study of educational organizations represented the first major rebuttal of the positivist orientation of educational administration as a field of practice and scholarship. From the 1980s onwards, as a reaction to dominant positivist and functionalist accounts of educational organizations, and drawing on developments in the social sciences, as well as social movements such as civil rights and feminism, a range of scholars emerged, writing in what has come to be known as the "critical tradition." This scholarship represents a broad range of approaches including feminism, humanism, post-positivism, postcolonialism, postmodernism, and critical policy. It examines the social and political impacts of educational organizations and of educational administration and leadership scholarship.

From a critical perspective, one of the major weaknesses of systems theory is that it conceives of organizations as abstract units, decontextualized from considerations of power relations, politics, and the specific historical and material contexts in which they are situated. Similarly, individualist accounts of the transformational leader who is able to transform a failing school are critiqued for they fail to consider the asymmetrical power relations within which leadership as a practice is exercised, such as the impact of gender and race on how leadership and leaders are conceived and represented. Nor do they consider the varying and specific contexts in which schools and other educational institutions operate. In short, critical scholars argue that educational leadership is not a politically neutral practice,

exercise, or process. Nor is it a property that is owned and wielded by a solitary individual over others. For critical theorists schools and other educational organizations are not power-neutral and decontextualized sites which can be subject to a purely scientific gaze, but rather are a critical component of the broader social relations of ruling. The managers and administrators who lead them therefore are not politically neutral role incumbents exercising a technical and managerial "science" – the organizational outcomes of which can potentially be controlled and manipulated. Rather, they are social and political agents whose practices have educational, social, and political implications, operating in organizations where different kinds of practice only make sense as part of the collective meaning-making exercised by its agents.

Schools, universities, and other educational organizations are viewed as sites of permanent struggle and contestation over meaning, with educational administrators occupying a crucial role in frequently reproducing social and power relations as part of the status quo. Conversely, critical theorists point to the opportunity that administrators have for challenging and subverting institutionalized power, given the authority and power they hold. Hence, there is a body of literature that has emerged examining the role that educational leaders can play as social activists and community advocates. In the educational leadership field, critical theorists have played an important role in examining the potentially deleterious social impacts of major schooling movements, such as the shift towards school self-management that has occurred since the 1980s as a result of the spread of neoliberalism as a dominant ideology.

The Turn to Educational Leadership as Critical Practice

Drawing on the turn to practice emerging in the social sciences, a small body of work has begun to emerge in critical theories of educational leadership which examines leadership from a range of practice perspectives. Predominantly the "thinking tools" of French sociologist, Pierre Bourdieu

(Wacquant 1989, p. 50) have been employed. Initially, Bourdieu's research with Jean Claude Passeron was widely employed by educational sociologists in the 1970s to examine how education acted as a site of cultural reproduction via the hidden curriculum. More recently, in educational leadership scholarship, Bourdieu's concepts of habitus, field, capital, misrecognition, and strategy have provided an alternative lens with which to conceptualize the classic agency/structure dilemma of sociological theory. In other words, it has assisted in thinking beyond binaries, that is, how we take into account the role that social structures such as class, gender, and "race" play in shaping individual practices – while also recognizing the impact of individual practices – on these structures. It has provided useful tools with which to critique dominant tendencies in the field towards individualist accounts of the leader as transformational leader and manager, which overlook issues of the embodied nature of power, for instance, how social categories such as class, gender, "race," and sexuality are socially constituted and embodied in the white male habitus of the principal. Alternatively, it has been employed to critique more positivist accounts such as the dominant school effectiveness movement. The latter attempts to isolate the key factors which effective schools and leaders exhibit but has tended to assume schools as socially and politically neutral sites and to overlook or downplay the impact of broader social and political contexts on schools and effective school leadership practices. It tends to reproduce essentializing and homogenizing constructs of the leader and leadership which are culturally decontextualized and empty of considerations of how schooling, as a field of social practice, is marked by struggles for legitimacy by differing agents who bring varying levels of capital to this field.

A number of insights have been gained through the employment of a Bourdieuian lens. It has helped us to understand leadership as a form of social practice which is constituted by the dialectical interplay between one's individual habitus (the internalized social structures of individuals which embody how they view the world and which shapes one's tastes, perceptions, and the

principles which underlie our actions) and the fields of power (structured, socially constituted spaces such as schools and universities). The notion of the habitus of the effective principal, for example, suggests that educational leaders are not aggregates of personal qualities or traits, divorced from the social contexts in which they have been raised, but instead come to the field of practice of schooling with their tastes, preferences, and dispositions already shaped by the social categories of class, gender, and ethnicity which their habituses embody. Their habitus is activated by encounters with the particular logics of practice which are at play in the schooling field, such as in Anglophone nations, the application of neoliberal economic principles which valorize a competitive and individualistic logic of the market, in which improved test results are a crucial part of the stakes over which schools and systems struggle in their quest for legitimacy. These logics of practice locate principals as business managers, entrepreneurs, and corporate leaders, rather than educational leaders.

In addition to Bourdieuian analyses, alternative practice approaches have begun to be employed by critical practice scholars in educational leadership. For instance, Foucault's analysis of knowledge and power has been used to examine how a market discourse of education and educational leadership "systematically forms that about which it speaks," by legitimating "certain forms of leadership for certain purposes ascribed to leadership." Thus, it is argued, such discourses produce "effects of power such as knowledge about what counts as leaders" and by implication, what does not count, what is delegitimated (Lingard et al. 2003, pp. 128–129).

Another recent approach is a site ontological perspective. One of the criticisms of Bourdieuian analyses of educational leadership practice is that concepts such as fields and habitus discursively suggest practices as "always and already structured" (Wilkinson 2010, p. 42). Ironically, then, this approach can draw the gaze away from the social practices that constitute educational leadership. The site ontological perspective instead argues that organizations such as schools can be conceived of as social phenomena unfolding through the "happening" of practices and activities' (Schatzki 2006). Rather than analyzing educational leadership as interactions between participants in a practice, or as socially constituted and constructed fields and habitus, educational leadership practices are "sites of the social" (Schatzki 2002), interconnected with professional learning, teaching, and student learning practices, and needing to be analyzed as they unfold in specific school sites in all their "happeningness" (Kemmis et al. 2014).

Conclusion

The study of educational leadership as critical practice rejects the traditional theory/practice divide and the premise of the rational model of science, in which scientifically derived knowledge provides the basis for theories that are then applied to practice. Rather it refocuses the analytic gaze by bringing theory into the lifeworld of educational practices. It emphasizes the social and purposive nature of educational leadership as a practice, arguing that leadership practices can only ever be understood in the specific sites in which they occur – through the words, ideas, and discourses that construct knowledge/power relations; and through their performance in social spaces and in relationship with others and the material world. Adopting a critical practice lens to examine educational leadership practices over those of agents does not suggest a rejection of the agency of human beings. Instead it foregrounds a political, humanistic, and transformative agenda, by suggesting possibilities for dialectical explorations of the simultaneously reproductive and transformative nature of leadership practices in their moment by moment unfolding within social organizations such as schools.

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Educational Leadership, Change, and the Politics of Resistance

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Synonyms

Educational leadership; Micropolitics; Organizational change; Resistance

Introduction

Educational leaders are pivotal players in change and reform activities. However, despite the proliferation of literature on change management, most major change efforts disappoint. As Grey (2005, p. 97) argues, "[t]he most striking thing about change is that it almost always fails." Obstacles, setbacks, and resistance are the norm.

To begin, it is important to distinguish between first- and second-order change processes (Watzlawick et al. 1974). First-order change concerns modifying or adjusting existing practice to improve effectiveness without consequential alterations to the educational institution or its work. Second-order change, however, involves systematic organizational restructuring and renewal, incurring fundamental or radical departures from usual practice. Educational institutions easily manage most first-order change initiatives which occur frequently, but second-order change is often problematic. Change is about improvement, solving problems, and confronting challenging issues, but the greater the change required, the greater the levels of resistance with concomitant impacts on productivity, work satisfaction, and loyalty.

Resistance to Change

The notion of "resistance" is a common theme in research about change. "Resistance" refers to social actors embedded in opposing power relationships wanting to challenge, disrupt, and/or overturn organizational decisions, discourses and/or power relations, and the social norms through which they are maintained. "Resistance" is usually described in negative terms, referring to oppositional responses (actions and nonaction), such as ill will, resentment, defensiveness, or confrontation.

Evans (1996) argues that it is human nature to oppose change unless individuals are involved in its creation. Major change requires people to give up feelings of comfort, long-held values or beliefs, and established routines. It entails new thinking, extra time, and effort; hence those affected try to retain comfort and quell confusion by practicing caution, constraint, and subversion, thus protecting the status quo. Abelson (1995) adds that individuals are defined by their strongest beliefs, so when major change challenges long-held attitudes, values, or assumptions, it becomes a threat to identity, making resistance inevitable. Machiavelli (1998) famously maintained that everyone is motivated by self-interest, so reform perceived as being personally disadvantageous presents itself as a risk to be contested. And while coercion heightens

resistance, even the most reasonable and necessary change efforts are often met with resistance.

Blase (1991) describes resistance to change as a micropolitical activity that is always present but which intensifies during periods of major change, making change efforts more complex and messy. Defining micropolitics as "the use of formal and informal power by individuals and groups to achieve their goals in organizations" (Blase 1991, p. 11), micropolitical structures and activities involve both convergent and divergent processes (those that enable and distract from achieving change). Resistance encapsulates the latter. Change evokes micropolitical defensiveness because it shifts power arrangements and can highlight inconsistencies and inadequacies associated with past behaviors or performance.

Rogers' (1995) work on the diffusion of innovation presents a bell curve of change adoption responses (from "laggards" to early adopters). Rogers cites homophilous systems (such as educational institutions) as those where change is most likely to be met with skepticism, suspicion, and resistance. In these situations, individuals from similar backgrounds achieve cultural convergence through their adherence to norms and values, and resist changes perceived to upset these arrangements and assumptions. Rogers has his critics, however, who point to problems with post facto definitions and suggestions that individuals (or organizations) fall into one particular change adoption category regardless of different change contexts and situations.

The "grief cycle" (Kubler-Ross 1969) is commonly used to describe change resilience, inferring that individuals experiencing major change undergo similar emotional phases as those who have lost a loved one: denial (disbelief), anger (change is unnecessary), bargaining (attempting to alter activities to suit preferred outcomes), anxiety, sadness, disorientation (insecurity), depression (despair), and finally acceptance, action, and going along with the change.

Resistance can stem from ideological, psychological, sociological, or logical factors. Ideological resistance can be the result of opposition to the political positioning or values underpinning education policy or strategy. Psychological resistance can be the result of personal emotional associations, for example, educational leaders may perceive barriers in communications with those harboring negative views about leadership or leaders (where other factors such as gender or race also play a part). Sociological resistance may result from deep-rooted institutional or community beliefs and coalitions. Resistance can also be based on criticisms of the rationale for change or the logic behind change processes being introduced (such as a lack of time or consultation).

All forms of resistance are political and influence the extent and nature of micropolitical activity within the educational institution and are often justified as professionalism (Blase 1991; Sarason 1990). However, while people can oppose change on many grounds, some may not be against change per se, but oppose the way change leaders go about it. Others still may be ambivalent about change, which can be construed as resistance.

Criticisms about the notion of "resistance to change" are based on the implicit hegemonic, hierarchically biased assumptions associated with the term: inherent connotations of virtuous, holistic, visionary educational leaders advocating change in contention with myopic and self-interested opponents who disrupt the achievement of strategic goals. Critics argue that change resistance can derive from various intentions and motivations, not all of which are "bad."

A further criticism is that the failure to probe the roots of resistance may be a result of institutional "undiscussables" – a term used by Argyris (1980). Undiscussables are topics that are too uncomfortable for open conversation with social actors being reluctant to raise "risky and threatening issues, especially if these issues question underlying organizational assumptions and policies" (Argyris 1980, p. 205) or reflect badly on leaders. Undiscussables promote conformity while skewing data and subsequent change efforts.

"Resistance" to change is acknowledged as a predictable political phenomenon in educational leadership and a worthy focus of research in this field. To date, however, there is little research available focusing on educational leaders' own resistance to change.

Why Educational Institutions Are Resilient to Change

It is human nature to resist change, unless implementers are involved in its creation (Evans 1996). Individuals are comfortable with the way things are; they are familiar with the way things work; they have established routines; and organizational cultures operate to maintain the status quo. Initiating change requires people to give up something – feelings of comfort, long-held values or beliefs, or ways of working. The change may entail encountering a different environment or new collaborations or reduced budgets – in extreme cases people may lose their jobs. Whatever, there will be some break from the past, new effort and thinking required, and extra time needed to implement the new pursuit. Uncertainty is never welcomed – it is easier to remain the same.

While change is difficult in all organizations, there are a number of barriers that are particular to the field of education that make major change especially difficult. Some relate to the nature of teachers' work. Teachers' work is complex, demanding, and requiring untold interactions each day and attention to the varied needs of large numbers of students, many of whom have learning or social difficulties. Schools have never served such diverse student populations. With current expectations that no student can fail, teachers are expected to tailor courses and pedagogy to individual needs to ensure optimal learning for every student. Some argue that students are becoming more challenging and can be harder to motivate, with teachers having to perform well in order to grasp and retain students' attention and cooperation to ensure learning engagement (see, e.g., Evans 1996). Curriculum expectations are constantly changing and expanding. On top are the daily, unexpected requests, complaints, demands, and queries from students, parents, and others. Hence, the quotidian of educational life is messy, busy, and exhausting and stakeholders are many. Time for prolonged planning, reflection, or problem solving is always lacking.

Educational institutions are also expected to enact mandatory policy change agendas that are extrinsic to internal priorities, which add to workload and steal time. The technical-rational-structural approach often adopted by education bureaucracies further exacerbates problems about change. Change is ongoing and uncertain and time is pressured, but imposed directives regularly ignore this fact. Top-down mandatory change often assumes a straightforward, logical, predictable implementation with prescriptive timelines and procedures, thereby failing to grapple with the complexity and dynamism of educational life. An unintended consequence is it diverts efforts from teaching and learning.

Another salient factor is that practitioners are rarely involved in policy or change agenda formulation. They are acted upon – they are not cosponsors of change – and are often portrayed as a part of the problem rather than as the solution to educational problems.

For many reasons it is common for older individuals to be more cynical and resistant to change (Evans 1996; Grey 2005). This is understandable since life often becomes more, not less, complicated with aging: family responsibilities increase (with pressures from children and aging parents), financial commitments present restraints, personal health issues may emerge, and eventual retirement plans must be made. Older staff can also be more confident, vocal, and visible dissenters, and seeing it is in their interests to maintain the status quo.

It is also a history of failed reforms that makes some experienced practitioners very cynical and resistant to change. Long-standing staff members are custodians of stories about the unintended, unanticipated, negative consequences or side effects of change. Educational leaders initiating change are often told that "this is the way we do things here" or that "we tried that once before and it didn't work." And in terms of the latter comment – in most cases this would be accurate.

While issues of low morale and disengagement may emerge from the nature of teachers' work, these are not helped by regular media attacks from politicians and public commentators. Politicians often cite purported problems to gain legitimacy for new reforms and restructurings, which erodes public confidence in education even further. In

addition, parents are more demanding, placing increasing responsibility on educational institutions as increasingly they are spending less time with their children (Evans 1996). These conditions are hardly conducive to inspiring change and innovation. Reform requires effort in an atmosphere of trust.

Governments' responses to global forces to ensure national economic competitiveness can release "dark" micro repercussions. Educational leaders cite ongoing external interventions; intensified workloads; insufficient resources; the timing, nature, volume, and disruption of externally imposed initiatives; and union objection as hindrances to change that exacerbate resistance and antagonism (Gronn 2009). Further exacerbating factors include a lack of agreement about policy or direction, increasing stress and burnout, widespread disenchantment and disengagement, rapidly changing student populations, a lack of collaboration in education policy making, and insufficient professional learning, preparation, and induction for principals focused on change, micropolitics, and resistance (Evans 1996; Gronn 2009).

Experiences of Educational Leaders

In education, resistance to change can come from within or outside the educational institution. Overwhelmingly, however, educational leaders view resistance as a negative, disruptive phenomenon stemming from self-interest, with perceptions being highly influenced by the behaviors exhibited by resistors. Resistance to change evokes differing responses among the people involved and can be active or passive and severe or less interfering. Specific behaviors include vandalism or violence, professional sabotage, disrespectful or discourteous conduct, clandestine caucusing or social exclusion, formal complaints, the withholding of information, rumor mongering, slander, and blackmail. Resistance behaviors can have institutional effects such as an increase in resignations or transfers, lowered productivity, increased absenteeism, and a general sullying of the workplace culture.

Resistance is exacerbated when factionalism and divisions appear within a group where there is more at stake for individuals holding strong views one way or another and when a sense of common purpose or collective vision evaporates. Crucial throughout major change is cohesive leadership – disloyalty or disunity makes the change process even more difficult. Educational leaders may, however, harbor their own opposition to change imperatives such as policy interventions or accountability procedures. Hence compliance is a conscious agential act – one that may not stem from honesty or integrity, whereas resistance may (reinforcing the view that not all resistance acts are unjustified).

A leader's tenure within an educational institution can influence the nature and extent of change resistance, with the early stages of tenure in a new institution being the time when the most robust forms of resistance are likely to be experienced. Leaders with long-standing tenure appear to experience fewer examples of aggressive resistance the longer their tenure. This indicates that education communities may experience difficulty in coming to terms with a new leader, new ideas, and unfamiliar *modus operandi*, whereas over time, a leader's views and processes become known, expected, and accepted. The initial years of a leaders' tenure are when the most radical reforms are likely to be undertaken (through necessity or choice) which may also explain this phenomenon. Further, educational leaders with long experience report more confidence in their position, major change processes, and outcomes. Overall, however, resistance to second-order change appears to be part of the change territory in education.

A culture of complaint is seen to have superseded an era of greater compliance in education and is viewed as an outcome of consumer choice, competitive individualism over collectivism, political and media appeals to students and parents as consumers of education, and an emphasis on market forces emphasizing responsiveness to consumer power. With a greater range of interested parties and higher community expectations, legal or procedural rights are more likely to be pursued to procure desired outcomes, with

complainants being more convinced of the effectiveness of these strategies.

Protestors increasingly seek restitution through power brokers such as boards/ councils, external supervisors or regulators, or unions. Others may seek to disrupt support networks within internal institutional leadership. Formalized resistance strategies increase the workload of educational leaders through meetings, negotiations, deputations, and formal documentation requirements, having to ensure procedural compliance or attend reconciliation or court appearances. The processes are stressful but effective in delaying or allaying mooted changes. While stakeholders and staff members can express a range of emotions, educational leaders feel constrained to act confidentially, diplomatically, and courteously. Educational leaders have to be adept at appearance management, hiding true feelings to present a steady, "bulletproof" persona, which is not always easy.

Opponents of change have considerable formal means of resistance available to them – means enhanced through localized knowledge, cultural resources, and associations. When change fails, resistance tactics have proven worthwhile.

Addressing Change Resistance

Change resistance in education can emanate from a number of sources: an overload of change initiatives; cynicism; a lack of ownership, consultation, or communication; insecurity and anxiety, a lack of support and recognition; or doubts about the benefits of change. Given that major change is difficult to enact, there is a considerable body of literature that attempts to address and reduce change resistance. Commonly mentioned ameliorative behaviors include:

- Articulating and communicating a clear rationale for major change based on transparent information
- Focusing the rationale for change on benefits for students
- Involving and negotiating with stakeholders who will be most affected by the change in

the development of common understandings, goals, and processes
- Being respectful of past practices
- Identifying and co-opting key people to lead aspects of the change activities and work with others through change processes
- Negotiating expectations – being transparent about what is going to happen, when, and how
- Developing role statements, responsibilities, and realistic timelines
- Widely communicating and reporting progress toward goals through formal and informal means
- Providing necessary professional learning and other resources
- Inducting newcomers to the change process
- Providing encouragement and support, with change leaders being personally available and involved
- Encouraging discussion about difficulties and devising solutions collectively
- Maintaining a strong focus on professional learning – growing talents, interests, skills, and knowledge, while fostering mentoring and coaching activities
- Being magnanimous with thanks, praise, encouragement, acknowledgment, and rewards (Evans 1996; Sarason 1990)

Conclusion

Opposition and resistance are to be expected in major educational change, with emotionality often overriding rationality. Resistance is exercised in myriad overt and covert ways, and educational leaders cannot underestimate how difficult change is to manage, or how antagonistic some people will be. And no matter how well planned, change can have unforeseen repercussions (positive and negative), which may incur further upset. Power struggles, political intrigue, ideological difference, and the maneuvering of knowledge and personal agendas make for micro-political messiness in school life and thwart change efforts (Sarason 1990). Resistance tactics are deployed because they often have the desired effect.

Resistance must be anticipated and acted upon. Educational leaders require political astuteness to lead and manage change successfully, yet many researchers reveal the lack of essential knowledge and skills of school leaders as the cause of change failure (Blase 2005; Evans 1996). As governments place more emphasis on measurable performance outcomes, leading and managing change will become even more important for educational leaders, with concomitant implications for their selection, appraisal, and longevity in the job. As Buchanan and Badham (2008, p. 18) argue, "the change agent who is not politically skilled will fail."

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Educational Leadership, the Emotions, and Neuroscience

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Synonyms

Affective neuroscience; Decision-making; Educational leadership; Emotions; Folk psychology; Somatic marker hypothesis

Introduction

Discussions of the emotions have recently become prominent in educational leadership research which advocates the belief that emotions are important for leadership to be effective. A central part of this research is the common sense concept of emotion that underlies the empirical studies of emotion and leadership. This notion, however, is part of folk psychology which, as a failed empirical theory, is unable to answer some of the most fundamental questions raised in the education and leadership literature: how emotions are generated, what they are, and how they are shared between people. This entry presents an overview of why emotions are believed to be important for leadership in education, how emotions are understood in the education literature, what is known about the history of the concept of emotion, and what the neurosciences can tell us about the nature and origins of "emotion." The entry concludes by indicating in which ways new neuroscientific knowledge contributes answers to the questions raised in the educational leadership literature.

Leaders and Emotions

Unlike the fields of organizational behavior and general leadership studies with their established

research literatures, the turn to the emotions as integral, and hence legitimate, components of leadership in education is relatively recent. At the same time, however, philosophical treatments of emotion have had a long and controversial history (Solomon 2010). Two features of emotion continue to shape the contemporary discussion: the view of emotion as primitive and dangerous, therefore in need of control by reason and, secondly, the very distinction between emotion and reason itself as constituting two different and opposing "natural" kinds. The emphasis on emotion as nonrational has been a characteristic of traditional, rational decision-making theory, prominently represented in educational administration by Herbert Simon, while the renewed focus on emotions and leadership represents a response to the predominant cognitive orientation in leadership and organization studies generally.

The discussions of emotions in education accept implicitly the nonrational – rational distinction as a true characterization of both emotion and reason – but focuses on one side of the dichotomy by investigating the emotional experiences of teachers and principals, without questioning the dichotomy itself. General themes in the empirical educational (leadership) literature are the presumed impact of teacher/leader emotions on students, educational outcomes, and teacher education programs. Topics include the emotional aspects of teachers' lives, emotions in teaching, and emotions and leadership more generally where emotions and leadership are considered as shared influence (Zorn and Boler 2007). A strong theme running through educational leadership discussions is the assumption that emotions are situated in social–political contexts, are therefore more than an individual's personal psychological property, and thus need to be investigated from within a social–political framework. In addition, there is a strong emphasis on gendered power relations that are said to shape the emotions of leaders, in particular women leaders, who are forced to adjust their emotions to the dominant rational, male administrative culture. Such adjustment requires emotional labor, which means suppression of genuine emotion or inducing emotions not felt in accordance with the requirements of the

workplace. Further to the empirical studies conducted on emotions and leadership in education, the concept of emotional intelligence provides a theoretical framework based on the belief that the emotional skills of leaders are imperative for effective leadership. Although the meaning of emotional intelligence remains ambiguous, its definition of emotion is that of folk psychology.

In the empirical literature, four reasons are offered in particular to support the claim that emotions are relevant for understanding leaders in education (Berkovich and Eyal 2014). (1) Emotional experiences and their displays express leaders' reactions to social reality and how that reality relates to their goals; (2) leaders' behaviors affect the emotions of teachers and others with whom they interact; (3) leaders' affective abilities are precursors of their emotions and behaviors, and as such, of desired work outcomes; and (4) leaders' emotions are also influenced by societal factors that have contributed to making administrative work more complex and political in unstable and competitive environments. The emotions referred to are generally those we describe in words such as fear, anger, disgust, surprise, sadness, and happiness. Explicit definitions of emotion are rare in the educational leadership literature, and where they occur, they are in keeping with folk psychological theories of emotion as in Berkovich and Eyal's account (2014, pp. 2–3) who describe emotions as affective experiences that include individual emotions such as fear or joy, and can be accompanied by bodily expressions, and sometimes lead to action.

The current state of knowledge of emotions in the education and educational leadership literature is descriptive in nature and largely presents phenomenological studies of how emotions are seen and experienced in teaching, learning, and leading contexts. Questions considered important for future research, raised but not addressed in the current literature, concern how agents manage to transmit emotions, or "catch" the emotions of others, as in emotional contagion. Above all, the current literature takes for granted the common sense understanding of emotion. While it is true that principals and teachers (and everyone else) have developed their own repertoires of how to

deal with their own emotions and those of others, given their general understanding of how the language of folk psychology and the meaning of its concepts works in everyday life, when these repertoires break down, as they often do, predictions of expected behavior can go badly wrong, with sometimes devastating consequences. This problem cannot be solved within folk psychology as emotions are not identical with the words we use to describe them. What we call emotions are mental states generated by and instantiated in biological brains and bodies. They are thus amenable to scientific investigation, as has long been recognized by Darwin. Recent work, especially in emotion science and affective and cognitive neuroscience, has contributed much to a better scientific understanding of the nature, origins, and functioning of emotion and what we call the emotions generally. It helps clarify whether or not, or in which sense, emotions can be said to be important for leadership to be effective. But first it is necessary to get an idea why folk psychology presents a false theory of mental states.

Folk Psychology and the Ambiguity of "Emotion"

Following Dixon (2012), the term "emotion" has not become applied to the systematic study of mental phenomena until the mid-nineteenth century. As we now use the term, it subsumes two distinct categories of mental states that had held sway since Aristotle and St. Augustine: troubling desires and passions on the one hand and the milder and less dangerous affections and sentiments on the other (Dixon 2012, p. 339). This distinction became blurred through the works of the moral philosopher Thomas Brown (cited in Dixon 2012) whose conception of "emotion" comprised quite diverse mental states. Ever after, "emotion" was treated as a significant *theoretical* category for the systematic study of the mind but remained difficult to describe, with a view of emotion as vivid feelings, on one hand, and emotion as expressible in bodily motion, on the other. This ambiguity has plagued emotion research to the present day. It is a source of contention in

contemporary accounts of emotion theory as the meaning of "emotion" changes depending on the theoretical frameworks adopted by psychologists. For folk psychology, however, this does not matter. As the oldest framework that purports to explain our mental phenomena, it is pervasive, deeply rooted, and denotes:

> the prescientific, commonsense conceptual framework that all normally socialized humans deploy in order to comprehend, predict, explain, and manipulate the behavior of humans and the higher animals. This framework includes concepts such as *belief, desire, pain, pleasure, love, hate, joy, fear, suspicion, memory, recognition, anger, sympathy, intention,* and so forth. It embodies our baseline understanding of the cognitive, affective, and purposive nature of people. Considered as a whole, it constitutes our conception of what a person is. (Churchland and Churchland 1998, p. 3)

Debates about how to appraise folk psychology's nature, what functions it has, and whether it can evolve have crucially centered on the question whether it is like an empirical theory or merely a social practice whose generally shared vocabulary makes possible a myriad of social activities such as the ones referred to in the above quote. Its purpose was said to be normative rather than descriptive, and unlike empirical theories its general sentences or laws were not seen to lend themselves to causal explanations. Delimited in this way, folk psychology was said to escape the kind of scrutiny to which every empirical theory can be subjected and which could in principle lead to its rejection, reduction, or even elimination.

It is now generally accepted that our common sense conception of mental states is theoretical in exactly the same way that the physical phenomena of science are, with the *propositional attitudes* (…believes, desires, fears that *p*) showing the same semantic structure as scientific theories (Churchland and Churchland 1998). Crucially, as folk psychology makes claims about the nature of mental states as representable in linguistic form, in light of both evolutionary knowledge of the late development of language propensity, and recent knowledge of actual brain architecture, functioning, and information processing, this claim has turned out to be unjustified. The basic units of

human cognition are not sentence-like structures, but patterns of excitation levels across a large population of neurons. Information processing does not consist of deductive inference between sentences but synaptic firings across activation vectors that transform them into yet other such vectors. None of the above comments deliver a fatal blow to folk psychology. But it does follow that if folk psychology is as theoretical as other theories of science, then mental phenomena, including our emotions, are a proper subject for scientific investigation. On the other hand, the folk psychological understanding of emotion/s continues unabated in everyday life.

Emotion Naturalized

While the study of the nature and origins of emotion is a common goal of both folk psychological science (the new emotion science) and affective neuroscience, the historical tension and definitional ambiguity more clearly affect the former. Emotion science is concerned with specification and classification of emotions, a difficult enterprise due to unstable shifting definitions. It focuses on such questions as how many emotions there might be and what emotion is anyway so that it can be measured. Affective neuroscience, on the other hand, is interested to explore the underlying neural substrates of emotion and is therefore primarily concerned with causal rather than definition or classification issues (Panksepp 1998). Affective neuroscience can be said to have evolved from the second view of emotion as embodied, drawing on Darwin's theory of emotions, and continued by James and Lange, whose combined views have become known as the James–Lange theory of emotions. In brief, the theory maintains that emotions are embodied. Commenting on the everyday view that emotion comes first and elicits bodily expression second, James says "My thesis on the contrary is that *the bodily changes follow directly the* PERCEPTION *of the exciting fact, and that our feeling of the same changes as they occur* IS *the emotion*." (James 1884, pp. 189–190). According to James, there is no ephemeral substance "left over." The

common sense sequence, described by James, of "we meet a bear, are frightened and run," is simply the wrong order. Expressed more formally, as Prinz (2004, p. 44) puts it, "... emotions are perceptions (conscious or unconscious) of patterned changes in the body (construed inclusively)." But as emotions have also been characterized as cognitive appraisal systems, a more comprehensive account integrates both perception of body states with cognitive appraisal of the person's overall situation, so that an emotion can be described as "a pattern of neural activity in the *whole* system ... including inputs from bodily states and external senses." (Thagard and Aubie 2008, p. 817).

This broad definition is based on a recent and still controversial conception of brain organization as rather more fluid than previously assumed, being better characterized by dynamic affiliation of neural systems than modularity. Because of such dynamic organization, emotion circuits and cognition circuits are so closely interlinked that it is more appropriate to speak of the cognitive–emotional brain. The traditional, philosophical dichotomy between reason and emotion, on this account, is no longer defensible. When applied to that traditionally most rational of activities, decision-making in educational administration, as elsewhere, this particular result implies that rationality de facto depends on emotion for rational decisions to be possible at all (Lakomski and Evers 2010). The most influential argument supporting this claim is Damasio's (1996) somatic marker hypothesis which in essence claims that positive or negative body signals such as gut feelings and hunches subconsciously "presort" how to appraise and thus respond to a stimulus. By signaling a positive or negative valence, the body (racing pulse, sweaty palms, increased heart rate) indicates how to respond to a situation and thereby reduces the potentially infinite decision space. If this thesis is generally correct, then emotions are indeed integral to decision-making and are part and parcel of all the neural machinery that enables humans to make choices and survive. Understood naturalistically, emotions are rational.

Given that emotion is embodied and its definition expanded as indicated, the question asked in

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the educational leadership literature on how emotion "travels" between people, or is "caught," central to the claim that leader emotion affects or "influences" other persons, and work outcomes, can in principle be answered by neuroscience. Unlike folk psychology, it investigates the origins, nature, and mechanisms of emotion and emotion transmission. The most basic form of transmission is known as *emotional contagion*. It refers to the human tendency automatically to mimic another person in regard to facial expressions, vocalizations, postures, and movements. This tendency has been studied especially in regard to empathy, also mentioned as fundamental in the leadership literature. It was found that humans do not empathize all the time and that an emotional connection and response is subject to an appraisal process and thus not merely automatic. Whether the actual neural mechanisms that generate empathy are primarily mirror neurons, as has been suggested, is still a matter for debate. However, there seems to be scientific consensus that human brains are hardwired for emotional, or broadly, social connectivity, regardless of what the actual neural mechanisms are that make this possible.

Conclusion

The discussion of and recent emphasis on emotion in education and educational leadership has rightly drawn attention to a neglected domain of human behavior. As mental phenomena, emotions are described in the language of folk psychology as this is the oldest and most deeply rooted language we have in which to express them. The acknowledgement that emotions, whether positive or negative, have an important role to play in education and educational leadership opens up a new dimension for research. While the phenomenological descriptions of emotion in leadership and classroom studies will continue to be necessary, and while the emphasis on social, cultural, gender, and power frameworks adds important dimensions to understanding emotions in broader contexts, these descriptions do not tell us what emotions are, why they work, or fail to work the way they do, how we can read or misread them,

and how emotions get shared in the first place. The language of folk psychology is not fit for this task, and is likely to be replaced, step by step, by the language of neuroscience that offers a causal account of the nature and origins of emotion and the mechanisms that make sharing between humans possible at all. The investigation of emotion sharing, from neurobiological perspectives to social–political environments, has barely begun. But the better we understand how brains and bodies produce emotion, the better we will be able to understand human behavior in its complexity, including what is referred to as "influence," a feature commonly believed essential for leadership. The neuroscientific evidence we have so far about biological brain architecture and how brains actually work has already contributed to the elimination of one highly influential philosophical dichotomy, that between reason and emotion, that has underpinned education and educational administration theory and practice. Rational decision-making, it turns out, is not possible in the absence of emotion. Whatever effective leadership may turn out to mean, understanding the causes of such human mental phenomena as emotions is an indispensable prerequisite.

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Educational Myths

▶ Social Imaginaries: An Overview

Educational Philosophy

▶ Philosophy with Children: The Lipman-Sharp Approach to Philosophy for Children

Educational Policy

▶ Foucault and Educational Theory

Educational Policy and Administration

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Introduction

In my 1992 Midwest PES paper "Analytical Philosophy and the Discourse of institutional Democracy," I briefly discussed the hostile criticism of Analytical Philosophy of Education (APE) by Professor Walter Feinberg and contrasted it with

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Author was deceased at the time of publication.

Prof. B. Paul Komisar's analytical discussion of the various forms of discourse in education. Contrary to Feinberg's caricature of APE, Komisar does not restrict himself to analyzing "crystallized concepts" nor does he ignore "struggles over meaning." "Komisar identifies four major categories of discourse in education, one of which is termed "Political Discourse." The three kinds of Political Discourse in education are (1) Philosophy of Education, (2) Policy Discourse, and (3) Publicity Discourse. All of these uses of language in education can be vague or ambiguous and can serve as the battleground in Feinberg's "struggles over meaning."

In this paper, I shall examine some key concepts, images, and ideals that are the subject of controversy in educational policy-making and administration with the goal of showing the contribution that a philosopher of education can make toward understanding "struggles over meaning" in policy and administration. Let me state for the record that I reject the view that the proper task of the philosopher in this area would be to show the "implications for policy and administration" "of various "schools of thought" in academic philosophy and to urge practitioners to make a dogmatic commitment to a single "ism." I suspect that my writing shows the influence of many of my teachers, colleagues, and students and the different views that they hold.

Policy and Administration

Educational policy and administration deal with the actual conduct and operation of educational institutions. A perennial problem for the philosopher of education is to demonstrate a connection between educational ideas and actual organizational processes. A possible strategy is to show that a particular ideology has become the basis for human action by showing that a proposed system of rules that the ideology advocates is actually followed. According to James E. McClellan (1968), policy-making is itself a rule-directed activity that generates the rules that govern the activities of office holders in an institution. Administration is commonly characterized as the

maintenance of the rules that govern an institution (Lipham 1964). For McClellan, the process of policy-making must ideally: (1) acknowledge conflicting interests, (2) be generated by an organization that carries on a public and reasonable debate, and (3) produce rules that can be actually enforced. James M. Lipham contrasts "administration" and "leadership," identifying "leadership" with activities intended to change the rules of an institution while "administration" maintains those rules. Notice that McClellan's definition of "policy" is programmatic in that it treats policy-making as a rational process. An older distinction – going back to Woodrow Wilson (1856–1924) – contrasts administration and politics and identifies "administration" with rational organizational analysis and "politics" with irrational social conflict.

Notice that in the above analysis, I employ John Rawls's notion of an "institution" as an analytical tool. Educational policy and administration take place within the context of educational institutions. For Rawls, an institution is "a public system of rules which defines offices and positions with their rights and duties, powers and immunities, and the like. These rules specify certain forms of action as permissable, others as forbidden; and they provide for certain penalties and defenses when violations occur (51)." While John Rawls is not an analytical philosopher, I shall employ his metaphor in an explanatory fashion (see Pepper 1982). I have already attempted to show conflicting uses of "policy" and "administration" in the writings of McClellan, Lipham, and Wilson. Now I shall use Rawls's metaphor as a "meta-metaphor" in an analysis of four metaphors that have had major historical influences on the practice of educational policy and administration.

An educational institution may be either an instrumental system (IS) or a noninstrumental system (NIS). In an IS, the institution exists to achieve a goal and the lack of attainment of the goal may threaten the existence of the IS. In an NIS, the institution exists because the activities that go on within the institution are seen as worthwhile – period. Also the rules that govern the institution may be either a tightly coupled system (TCS) or a loosely coupled system

(LCS). A TCS has strict, precisely defined rules that prescribe virtually every activity that office holders participate in. In an LCS, the rules are vague or ambiguous and subject to continual reinterpretation. In the next section, I will describe four metaphors for educational administration that can be put into practice and become full-blown ideologies: the temple, the traditional factory, the human relation-oriented version of the factory, and the jungle (see March 1972; Weick 1982).

1. In the temple, the school is a TCS and an NIS.
2. In the traditional factory, the school is a TCS and an IS.
3. In the human relation-oriented factory, the school is still an IS but has become an LCS.
4. And in the jungle, the school has become an LCS and may be an NIS. (But the jungle institutions may not survive for long.)

Administration and School Images

Terrence E. Deal and Martha Stone Wiske see both policy-making and administration as heavily influenced by one's vision of schools as organizations or school images. They identify three metaphors – the factory, the jungle, and the temple – as the bases of three contemporary school images. The main section of this article will discuss the history of these school images. The final section of this article will address parallels between the philosophical reflections on educational policy of Thomas F. Green and John Dewey and the policy-making of James B. Conant and his archenemy Frederick M. Raubinger.

The School as a Temple

The metaphor of the school as a temple places the administrator in the role of a priest whose task is to enact rituals and ceremonies that maintain the faith. William Torrey Harris (1835–1909) – a well-known advocate of idealistic philosophy – rose to the position of Superintendent of Schools in St. Louis and subsequently served as US Commissioner of Education. Harris

would have insisted that only those activities carried on through social institutions have educational value (Dunkel 1973). In the nineteenth century, States increased the power of school administrators (Karier 1982). William Estabrook Chancellor (1867–1963) narrowed William Torrey Harris's faith in American institutions to a faith in public schooling. Chancellor was contemptuous of politicians and businessmen. He explicitly compared schooling to religion and superintendents to ministers. Chancellor advocated an increased authority for school administration and the abolition of school boards. Like his hero Woodrow Wilson, Chancellor sought to separate administration from politics. Ironically, in 1920 Chancellor's career temporarily ended because he became involved in a smear campaign against presidential candidate Warren G. Harding. He was dismissed from his teaching position, hunted by a lynch mob, forced to leave the country, and had his book on Harding burned by Harding Administration. Books on school architecture of the late nineteenth century explicitly referred to the school building as a temple (Cutler 1989). After several years as a traveling salesman in Canada, Chancellor returned to the United States and resumed his teaching career (Mason 1986; Russell 1968).

The School as a Factory

Chancellor's textbooks were displaced by those of Ellwood P. Cubberley (1868–1941). While Cubberley was sympathetic to Chancellor's authoritarian views, Cubberley's ideology was based on a different metaphor: the factory. Cubberley sought to establish a profession of educational administration, promoted the use of intelligence tests as a selection device, and urged the increased presence of businessmen on school boards. The rhetoric of the school as a temple was being displaced by the new rhetoric of efficiency (Scott 1915). Like Chancellor, Cubberley deplored the presence of women and minorities on school boards, but unlike Chancellor, Cubberley idolized businessmen. He saw children as the product of the school as factory – designed by the professionals to meet the needs of society. Cubberley saw the American educational

system as the apex of civilization and the professional school administrator as one of history's greatest heroes. But – like Chancellor and Wilson – Cubberley sought to free administrative decision-making from the conflicts of politics. Cubberley believed that the presence of businessmen on school boards would give the professional school administrator greater freedom of decision-making (Callahan 1962).

The Human Relations Approach

Douglas McGregor (1906–1964) opposed the authoritarian inclinations of both the temple model and the factory model. He studied psychology at Harvard during the 1930s – a time when Harvard psychologists sought to identify themselves as scientists and divorce themselves from philosophy. Like many early writers on organizational behavior, he based his views of organizations on means-ends rationality and argued that, in a congenial work environment, employees will seek to integrate personal objectives with organizational goals. McGregor deplored the carrot and stick approach to management. As President of Antioch College from 1948 to 1954, he sought to include students, faculty, and blue-collar workers in discussions of college policy, but his openness left McGregor vulnerable to the machinations of professional anti-communist informers who were willing to spread outright lies about student activities on the Antioch campus. In McGregor's view of management, we see a tension between the rhetoric of the democratic institution and the image of the school as a factory (Oliker 1976).

The School as a Jungle

A 1960 paper by McClellan applauded administrators' efforts to develop scientific administrative theory but warned that the then new behavioral science-based administrative theory assumed a centralized model of decision-making. But the administrative theorists discussed by McClellan may have been engaged in wishful thinking. During the mid-1950s, a popular film (based on a popular novel) introduced a phrase into the national vocabulary that contained a new and disturbing metaphor for the school: The Blackboard Jungle (see Hunter 1955).

The need for constant negotiations, the exercise of power, and the flux of symbolic meaning that are characteristic of the school as jungle seem to be the school image that informs the administrative theory of James G. March – a distinguished social scientist on the faculty of Stanford University. During the 1970s, March conducted extensive studies of college presidents and school superintendents. His resulting works can be understood as a rejection of most of the assumptions of educational administration theory in the twentieth Century. Specifically, March rejects the assumptions that: (1) organizations exist to achieve goals; (2) individuals act on their beliefs; and (3) only actions based on goals or beliefs are rational. He sees schools as "organized anarchies" or "loosely coupled systems" which have ambiguous goals, unclear relations of means and ends, and decisions made in the context of chance interactions of people, problems, and solutions. For March, actions on the basis of intuition and tradition are just as rational as actions toward a goal mind. His work even hints at a convergence with the long-forgotten views of W.T. Harris. March's disciple Karl E. Weick urges school administrators to consider the leadership style of a clergyman as possibly more appropriate to schooling than that of a management scientist.

Ideals of the Educational System: Democracy or Rationality?

While the metaphors of temple, factory, and jungle do seem to identify four kinds of educational institutions, we lack any clear intuitive characterization of educational systems. And the question of the very existence of educational systems is still controversial in some circles. Philosophical inquiry about educational systems and the making of educational policy at the national level seems to involve at least three central questions:

5. Does nation N have a system of education?
6. Can policy for that system be made rationally?
7. Can policy for that system be made democratically?

According to Thomas F. Green, the Educational System began to take shape around 1910. The System is a well-organized institution defined by rules that operate with the rigor of an Aristotelian practical syllogism. The System as Green sees it as composed of primary and derivative elements.

The primary elements are:

• P1: Schools
• P2: A medium of exchange
• P3: A principle of sequence

While the derivative elements are:

• D1: Size
• D2: A system of control
• D3: A distribution of goods

And the System "behaves" according to such laws as:

• L1: The Law of Zero Correlation
• L2: The Law of Last Entry
• L3: The Principle of the Moving Target

Green paints a picture of the System as a well-programmed computer that will continue to function in spite of the misguided (he thinks) efforts of reformers. This claim may be reassuring to the conservative who fears the breakdown of the System, but it is hardly reassuring to those who see the System as perpetuating social injustices. Green's L1 asserts that educational credentials become worthless once everyone attains them. L2 can be summarized as the claim that the least advantaged social groups cannot benefit from the System until the higher status groups have exhausted the System's resources. And L3 maintains that the attainment of educational credentials can change from being sufficient conditions for social status to being necessary conditions.

Why did the System come into being? In the nineteenth century, a wide variety of schools existed with drastically different functions. John Dewey favored the organization of a national system of education as an expression of the evolution

of America into a democracy. In teacher education the normal schools which taught teaching methods existed completely separate from university education departments which prepared educational researchers. Dewey's ideal was a unified college of education that integrated both functions and prepared teachers in the public interest.

Dewey would have rejected Green's suggestion that the logic of the educational system is unassailable by any external standards. He warned in a 1903 paper entitled "Democracy in Education" that the authority structure of any kind of educational institution must be evaluated by the standard of whether it impedes or encourages the freedom of thought that is necessary in a democratic society. Thirty-five years later, Dewey reiterated this point in a paper entitled "Democracy and Educational Administration." In that paper – an address to a group of school administrators – he chided his audience for their failure to develop structures that allowed teachers a sufficient role in decision-making.

The conflict between the views of Green and Dewey on educational policy-making can be termed a conflict between rationalist and democratic philosophies. This conflict is not just a theoretical debate for the philosophy of education classroom. During the 1950s and 1960s, New Jersey State Commissioner of Education Frederick M. Raubinger (1908–1989) attacked the work of the Educational Testing Service – located in Princeton, New Jersey – and its guiding inspiration former Harvard University President James B. Conant (1893–1978) as an undemocratic elite who had seized educational policy-making from public officials. Like Chancellor, Conant was fond of dismissing critics of public education as being misinformed. Raubinger, by contrast, was a firm believer in local control of education (Shine 1975) who devoted an entire chapter of his 1974 educational administration textbook to a discussion of democratic theory. In the early 1970s, Conant sought to establish the Education Commission of the States which took as its mission the expansion of the 2-year community colleges.

Raubinger pointed out in 1972 that the ECS has also sought to increase the power of the 50 State governors over educational policy at the expense of education officials. In his autobiography "My Several Lives," Conant clearly advocated the expansion of the 2-year college at the expense of the 4-year college. Because of the influence of Conant and the ETS, Raubinger was forced to resign as New Jersey State Commissioner of Education in 1966. From 1966 to 1976, Raubinger taught in the Department of Educational Administration at the University of Illinois at Urbana-Champaign.

During the 25 years since Conant completed his autobiography, the 2-year college has continued to be the subject of fierce debate (Levinsohn). The conceptual framework of this entry can illuminate controversies over this new kind of institution. The earliest type of 2-year college – the junior college – satisfied a public demand for access to higher education while rationally fitting into the educational system and enabling students to transfer to bachelor's programs. But the junior college was never seen as a "temple of learning" like the traditional university. Almost immediately, the factory model of administration with greater emphasis on vocational education and a rational fit with the job market became the controlling ideology of the junior college. However, recent demands on these institutions by ethnic minorities have placed faculty in a jungle environment wherein the role of the teacher is poorly defined. Cynical administrators see this situation as an opportunity to deprofessionalize teaching and expand vocational programs that do not terminate either in a degree or in the opportunity to transfer to a bachelor's program. But newer non-degree programs and the reduction of faculty can be seen as antagonistic to the demands of the community for more course offerings. Jungle-oriented administrators' attempts to save money may backfire and antagonize the community and threaten the survival of the institution. Perhaps a return to the more ministerial role by educators that was characteristic of the school as temple could even be defended as democratic (see Weick 1982)!

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Educational Practice

▶ Critical and Social Justice Pedagogies in Practice

Educational Semiotics, Greimas, and Theory of Action

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Synonyms

Action; Culture; Edusemiotics; Ethics; Greimas; Modal competence; Narrative; Narratology; Semiotics; Signification

Introduction

This entry addresses the action theoretical semiotics derived from A. J. Greimas's theory and positions it in the context of edusemiotics. Greimas's narratological theory is discussed and investigated in terms of its fruitfulness for education. The entry focuses on the major features of Greimas's theory such as his famous actantial model as well as the anthropomorphic, or human- and subject-centered, approach in general. According to Greimas, at the core of the meaning of every significant discourse, there lies a typical human situation within which the actants – or entities that assume certain roles in a narrative story – function as Subject and Object, Sender and Receiver, and at times also as Helper and Opponent. Greimas's central analytic tools, the semiotic square and the generative model, are interpreted in dynamic terms and applied to the analysis of education as a meaningful practice. These tools help us see education as a value-based action and shed a critical light on the pre-supposed dualism between nature and culture in the context of education. For the analysis of

action, Greimas's major concepts prove themselves to be especially useful. The conception of competences expressed, specifically, in modal verbs such as *want*, *can*, *know*, and *must* is significant for education. As such, education becomes an action that strives to develop students' competences. In this action, the roles of teacher and student are dynamically differentiated. While a student acts as a Subject actant, a teacher acts as a Sender. The role of Sender is, however, shifting, thus defying the solely central position it assumed during the beginning and ending phases of the narrative, edusemiotic process.

Why Greimas?

A. J. Greimas (1917–1992) is one of the most important semioticians and the founder of the Paris school of semiotics (Perron and Collins 1989). Starting as a linguist specializing in semantics, he contributed to the Continental semiotics founded by Saussure and was also influenced by such important structuralists as Barthes, Levi-Straus, and Hjelmslev. He then turned to narratology by way of Propp and developed his theory in the direction of the anthropomorphic analysis of subjectivity. In *Structural Semantics* (Greimas 1976) he stated the famous actantial model: Subject, Object, Sender, Receiver, Helper, and Opponent. The most comprehensive, though quite a desultory, presentation of his theory is in *Semiotics and Language: An Analytical Dictionary* (Greimas and Courtés 1982). For Greimas, semiotics is not the study of discrete signs but rather of the continuous signification process: the articulation of meaning that takes place in the two macrosemiotic systems of natural languages and the natural world. Thus, Greimas's theory is not restricted to the linguistic sphere. The concept of a sign as a Saussurean relatively fixed dyadic combination of content and expression is not as important to him as either the smallest signifying elements (semes) of which every sign is composed or the larger signifying wholes, meaningful expressions or discourses, which are the main research object of his semiotics. The two famous

tools for semiotic analysis developed by Greimas are the semiotic square and the generative model.

Like Peirce, Greimas was striving for a theory of semiotics as empirical science using a hypothetical–deductive method with formal metalanguage. Yet he shunned metaphysical speculation and did not, in contrast to Peirce, appreciate any ontological interpretation of his theory (Greimas 1987). Gremas's semiotics employs three levels of metalanguage. The signifying expression (the whole) is to be translated into a language of description which then must be "interpreted" in methodological language forming the second level. Thirdly, methodology must be explicated in epistemological language. This structure offers a way to keep research under conceptual control and normatively neutral.

The Semiotic Square

The semiotic square is a heuristic device suitable for analyzing both the smallest semes and the fundamental structure of discourse as a whole. Such analytic tool is based on the basic structuralist idea of binary opposition. For Saussure (1983), the meaning of a sign – a word – depends on its negative relation to other words in that it does *not* mean what other words mean. This relationship is not simple; one sign can differ in multiple ways from another. In Greimas's semiotic square, there are three kinds of relations: contrary (horizontal, incremental, inclusive, permissive), contradictory (diagonal, absolute, exclusive, negation), and complementary (vertical, conditional, presupposing). The term under investigation is placed in the upper-left corner and, if some other terms can be placed in other corners, then its "meaning" is known! (Fig. 1). For example, if the sign being studied (S1) is *masculinity*, then the contrary term (S2) would be *femininity* and a contradictory one would be *non-masculinity*, which is the complementary term to femininity; respectively, non-masculinity is complementary to femininity. It is important to acknowledge that there is a dynamic model built into the semiotic square; a
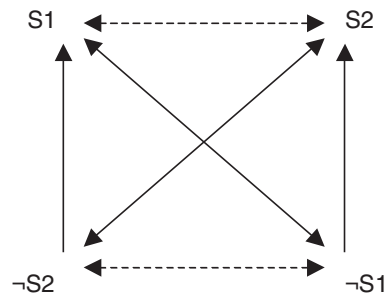
Educational Semiotics, Greimas, and Theory of Action, Fig. 1 The semiotic square

sign (or thing) can change to the contrary only via negation: from S1 you can get to S2 only via non-S1.

The Generative Model and Values

The generative model is a process–structure used to analyze a discourse as a whole by differentiating between its deep and surface structures. The deepest level represents the fundamental *value* structure analyzed with the semiotic square. At the *semio-narrative* level, the Subject interacts with other actants, eliciting action motivated by the fundamental value structure. This surface level is still abstract. All the concrete details, such as individual actors, their features, and time and space relations, appear at the third discursive level. As a heuristic device, Greimas's model does not claim to be realistic; rather, it depicts metaphorically the creation of meaning from an abstract idea to the concrete story or expression: from surface to depth. The fundamental, or basic, values can be individual or social, depending on the type of discourse. If the discourse belongs to idiolects (i.e., its meaning is individually based), then the basic value structure is Life vs. Death. The basic values of sociolect (or collective) discourses are Culture vs. Nature. These values can be positioned in a semiotic square, and it can be seen that the value balance can be shaken if the other is negated to contradiction. For example, in the folkloric fairy tale as a traditional subject matter of research in narratology, when a dragon steals the Princess, this manifests a negation of

Culture to Non-Culture, eliciting a strong axiological evaluation: Culture is good, Nature is bad. This imbalance of values is the motivation for the Sender actant, the King, to send the Subject actant, the Prince (usually a foreigner), to negate Nature by killing the dragon and to return Culture to its safe position by rescuing the Princess. The actants' actions can be analyzed as narrative programs and schemas, for which Greimas developed the formal metalanguage of description.

Modality and Competence

Greimas's crucial theoretical invention, from the point of view of edusemiotics, is the conception of modalities, specifically related to the concept of competence. The modality is something which modalizes or transforms one sign into another. The basic modalities are *being* and *doing*, which reciprocally modalize each other. The easier case is doing, which means causing something to be. Doing causes a change in the properties of an Object, so it causes this object to be other than it was before, and thus it modalizes its being. Reciprocally, the being of the Subject modalizes its doings. A particular kind of being – certain properties of the Subject which cause or make it possible for it to do something – is competence. Greimas discussed education, and specifically didactics, as an activity that edifies the competence of the student (Greimas 1979). Even more important for the study and practice of education are *modal competences*, which refer to the idea expressed in natural language by modal verbs: *want, can, know*, and *must.* These modalities also serve as the keys to the semiotics of passions (Greimas and Fontanille 1992).

The concept of competence can be compared to the ontological concept of disposition. The possible properties of any being are often divided in two categories: *dispositions* and *qualities*. The latter are regular features like size, color, height, weight, etc. Dispositions – such as *fragility* – are strange, however, because they are not at all perceivable and manifest only in certain situations. Fragility manifests only when the fragile being breaks. Often a disposition is then also gone.

Dispositions are important because all the dynamics of being seems to be based on them. A helpful way to see the relation between dispositions and qualities is that they are just two sides of the same coin. The manifestation of any quality is based on a disposition of being, and any disposition can manifest in a certain situation. Just as the way that any being manifests qualitatively and quantitatively in its environment is based on its dispositions, the Subject's action is based on its competences (Pikkarainen 2014).

The Structure of Education

How can the meaning of education as a practice be analyzed using Greimassian tools? Contemporary education has a sociolectal rather than idiolectal character, even though it includes idiolectal meanings (especially from the students' viewpoint). The basic tension of modern pedagogy, known after Kant as the *pedagogical paradox*, is the tension between freedom as a goal of education and coercion as its means. Complementary to this is the tension between an individual and society as a whole. These two dimensions form a cross-table of four areas or principles. Two of these principles are rather traditional content and expression, stemming from the days of Fichte and Herbart. The first is a student's ability for growth as a natural feature, referred to as *perfectibility* by Rousseau and *plasticity* by Dewey. The second is the demand by educators for autonomous action from their students. These are still individual principles. The social side encompasses the principle of contextuality or the effect of prevailing culture on education, hopefully eliciting a better future for society (Mollenhauer 2014).

An analysis of the basic values of education is beneficial at this point. The strongly one-sided axiological evaluation of the value structures of discourses typical to archaic folklore is problematic in the context of contemporary education. The paradoxical tensions in education suggest that one cannot choose either side – Nature vs. Culture – or even strive for harmony between them, because the essence of modern education is based precisely on the dynamic contradiction between

Educational Semiotics, Greimas, and Theory of Action, Fig. 2 Semiotic square of education
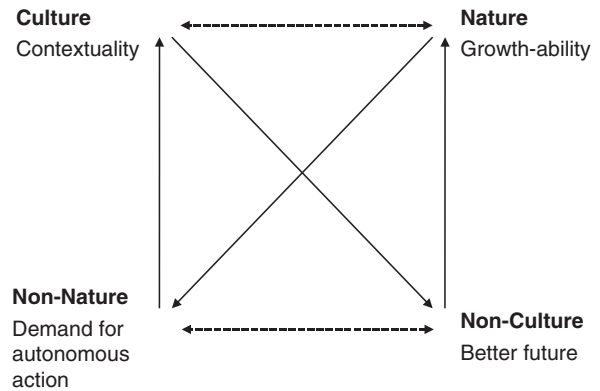
them as informed (even if implicitly) by Cartesian dualism between body and mind. Therefore, positioning the abovementioned principles of the theory of pedagogical action in the corners of the semiotic square is appropriate (Fig. 2). The individual growth–ability (the presupposed competences) represents Nature, the demand for autonomous action (teaching) represents Non-Nature, contextuality represents the prevailing Culture, and a better future represents Non-Culture. According to this analysis, there is in education a double-dialectical process where the negation of Nature (e.g., discipline) makes cultural existence possible and the negation of Culture (e.g., critical education) makes natural existence possible. This dialectic assists in resolving the problem between dichotomized views of education as a tool to radically transform society and also as a tool to secure the cultural status quo.

The Role of the Teacher

In order to construct a semio-narrative actantial structure of pedagogical action, some classical Greimassian conceptions are to be revisited. One concerns the actantial roles: Who is the Hero in (as a Subject of) educational process? If teacher or educator is the Subject, then what is the role of the student, and vice versa? The canonical narrative schema of a Subject posits a sequence of acts or

the Subject's trajectory consisting of three trials or tests: qualifying, decisive, and glorifying. In the first test, or *manipulation*, the Sender evaluates the competence of the Subject and makes an initial contract. In the second test, called *performance*, the Subject, who acts according to their competence and the initial contract, tries to solve the problem. In the third test, called *sanction*, the Sender/Receiver evaluates the competence of the Subject according to their accomplishments and either accepts or rejects them. Hence, the student is the Subject, and the teacher is the Sender. However, from the edusemiotic perspective, the teacher is also subject to analysis in terms of teaching and evaluation, thus becoming both a Sender and a sent Subject trying to advance and protect the Culture (now attuned with Nature) by developing students' competences.

Educators aim to affect the future actions of students by causing changes to their competences. Competence is a strange property: it is not directly perceivable but can only be inferred and assumed according to the perceivable *action* of the Subject. The evaluation of competence is thus complex. To affect someone's competence is even more complex. Three ways to change a Subject's competence can be posited: by pure chance, with no special or known reason; by means of biological maturation, or decay, or physical injury as causally effable properties; and by *learning* wherein competence changes along with the actions of

Subjects. The only efficient way to affect students' competence, therefore, is for teachers to make them do something by sending them to perform (Pikkarainen 2010).

Action, Learning, and Teaching

Greimas describes action as merely a sequence of narrative programs or individual acts where an actant causes something to be. Formally, a narrative program is expressed as $A1 > (A2 \text{ and } Ov)$; this can be read in terms of Actant 1 causing Actant 2 to get a value-object, i.e., some property. This sequence is in line with the classical analytic theory of action. In action theoretical semiotics, however, action is understood broadly as a continuous circular interaction between Subjects and their environment. Such a circle includes reciprocal effects: The deeds or narrative programs travel from the Subject to the environment. As a recursive feedback from the environment, perceptions travel to the Subject. Also, external and internal actions are differentiated, with the latter referring to the Subject's thinking in terms of planning deeds and evaluating perceptions and the former as perceivable by an observer. The deeds affect the objects in the environment, but the internal action is not effable to an observer. Both spheres of action cause, or can cause, some changes to the competence of the Subject. If and when people act, they always learn something. There are no strict laws about what kind of learning follows from particular kinds of action, yet it can be assumed that doing X will develop the competence of something more or less similar to X.

Teaching thus becomes *action* when and where one is trying to make another person do something that would cause the latter to learn what needs to be learned. Even though the two actors can be *one* person (as in the case of *self-education*), the same questions arise: How can someone know which competences are possessed and which are still needed? Exactly what needs to be done to obtain the needed competence and how can this be achieved? While some of these problems can be partially solved by the curriculum, educators need to develop interpretive skills as a province of edusemiotics so that they can fully tackle their tasks.

Modal Dynamics and the Levels of Learning

Modal competences affect our actions and our learning in a certain structural way. Unlike Greimas's semiotic square, the structure presented here can be drafted as a circle. The natural starting point for the analysis of the circular structure is the modality of *want*. Action is always elicited by some kind of wanting to do, or to get, something. The next modality is *can,* which may be realized or not. If it is realized, then the Subject gets what is desired, but often the trial remains unsuccessful. Both successful and unsuccessful trials in different environments will lead to some kind of knowledge, which would then increase the probability of success. The last modality is *must,* which directly affects *wanting* as a kind of second-order relation. Secondly, the various levels of learning can be differentiated. The lowest level is connected with the material striving for self-maintenance and survival: learning here is *pragmatic*. The nature of the *must* modality is peculiar to this level and can be expressed in the technical, "if…then," terms: if you want X, then you must do Y. The second, and very broad, level is *social learning*, where complex collections of actants participate in different actions. Here, the Subject must take into account the other ways of wanting and acting expressed by all members of society, and the *must* modality can become a form of social norm. At this level, the language develops that creates a special area of shared and public knowledge. This, in turn, leads to the third and highest *existential* level of learning. This is the level at which human Subjects develop proper conscience, i.e., a sense of individual and universal moral responsibility. Edusemiotics not only reconceptualizes Greimas's theory but also calls for the continual research into the modalities of competence that enhance learning and ensure

ethical relations between teachers, students, and larger environments.

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Educational Technology

► Open Educational Resources

Educational Technology (I)

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Technology

There are many ways of understanding technology. In this entry, technology is conceived, in a very broad manner, as any human artifact, method, or technique that is created for the purpose of making it easier for man to work, travel, or communicate or to make life more fun and enjoyable to him.

Technology, in this sense, is not new – as a matter of fact, it is almost as old as man, homo creator, himself.

Not every technology invented by man is relevant to education. Some technologies only extend his muscular physical strength. Other technologies only allow him to move through space more quickly and/or with less effort. Neither of these are greatly relevant to education. Technologies that amplify man's sensory powers, however, no doubt are relevant to education. The same is true of technologies that extend his capacity to communicate with his fellow men. But above all, this is true of technologies, such as are available today, that augment man's intellectual powers: his capacity to acquire, organize, store, analyze, relate, integrate, apply, and transmit information.

Technologies that greatly amplify man's sensory powers (such as the telescope, the microscope, and all the other instruments that amplify man's sense organs) are relatively recent and made modern experimental science possible.

Technologies that extend man's capacity to communicate, however, have existed for centuries. The most important ones, before the nineteenth century, are the invention of typically human (conceptual) speech, of alphabetical writing, and of printing (especially the printed book). The last 200 years saw the appearance of the modern post office, the telegraph, the telephone, photography, cinema, radio, television, and video.

Technologies that augment man's intellectual powers and that are centered on the digital computer are the most recent, since they were developed mostly after 1940. The computer is gradually absorbing the technologies of communication, to the extent that these become digital.

Technology in Education

A variety of expressions is normally employed to refer to the use of technology, in this sense, in education. The rather neutral expression "Technology in Education" seems preferable, since it allows us to refer to the general category that includes the use of every form of technology relevant to education (hard and soft, including

human speech, writing, printing, curricula, programs, chalk and blackboards, and, more recently, photography, cinema, radio, television, video, and, naturally, computers and the Internet).

It is admitted that nowadays, when the expression "Technology in Education" is used, hardly anyone thinks of chalk and blackboards or even of books and magazines, much less of something abstract such as a curriculum of studies. Attention is normally concentrated on the computer, because it became the point of convergence of all the more recent technologies (and of some of the old ones also). And especially after the explosive commercial success of the Internet, computers are hardly ever thought as standalone equipment: the network became the computer.

It is sensible, however, to remind educators that human speech, writing, and, consequently, lectures, books, and magazines, not to mention curricula and programs, are technology and that, therefore, educators have been using various technologies all along. It is only their familiarity with these technologies that somehow makes them transparent (i.e., invisible) to them.

"Technology in Education" is preferable, as an expression, to "Educational Technology," since the latter seems to imply that there is something intrinsically educational in the technologies involved, which does not seem the case. The former expression allows for the possibility that technology that was invented for purposes totally alien to education, as is the case of the computer, may, eventually, become so tied to it as to make one wonder how education was ever possible without it. Human conceptual speech, writing, and, more recently, the printed book were also invented probably for purposes less noble than education. Today, however, education is almost inconceivable without these technologies. In a few years the networked computer will almost certainly be in the same category.

Distance Education, Distance Learning, and Distance Teaching

Of these three expressions the third is probably the least used and yet, it is the only one that is technically correct.

Education and learning are processes that take place within the individual – there is no way that education and learning can occur remotely or at a distance. Education and learning occur wherever the person is – the person is, in central and very important ways, the subject of the educational and learning process, not its object. So, it is difficult to imagine how Distance Education and Distance Learning are possible, despite the popularity of these expressions.

It is perfectly possible, however, to teach remotely or at a distance. It happens all the time. Saint Paul taught, from a distance, the Christian faithful who were in Rome, Corinth, etc. – using handwritten letters. Authors, distant in space and in time, teach their readers through printed books and articles. It is possible to teach, remotely or at a distance, through motion pictures, television, and video. And, today, we can teach anyone, almost anything, any place, through the Internet.

So, the expression "Distance Teaching" will be used in this article whenever there is need to refer to the act of teaching remotely or a distance. That education and learning can happen as a result of this teaching is undeniable, but, as argued, this should not lead us into thinking that the education and the learning taking place as a result of remote or distance teaching is occurring remotely or at a distance.

Technology-Mediated Learning

Despite its popularity, distance teaching is not the best application of technology in education today. This place should be reserved to what might be called Technology-Mediated Learning.

As mentioned, there is no doubt that education and learning can occur as a result of teaching. But neither is there doubt that education can occur through self-learning, i.e., the kind of learning that is not associated with a process of teaching but that occurs through man's interaction with nature, with other men, and with the cultural world. A large portion of human learning takes place in this form, and, according to some researchers, learning that takes place in this form is more significant, that is, happens more easily, is

retained longer and is more naturally transferred to other domain and contexts, than learning that occurs as a result of formal and deliberate teaching processes (i.e., through instruction).

What is especially fascinating in the new technologies at our disposal today, particularly in the Internet, and, within it, in the Web, is not that with their help we can teach at a distance, but that they allow us to create rich learning environments in which persons who are interested and motivated can learn almost anything without having to fall victims of a process of formal and deliberate teaching. Learning, in this case, is mediated by technology alone.

There is no doubt that behind the technology there are other persons, who prepare the materials and make them available in the net. When someone uses the resources now available in the Internet in order to learn in self-motivated, exploratory fashion, he uses materials of different natures, prepared and made available in the most widely diverse contexts, not rarely without any pedagogical intent, and he does it in an order that is totally unpredictable, and that therefore cannot be planned, and in a rhythm that is totally personal and regulated only by the desire to learn and the capacity to assimilate and digest what he finds.

Because of this, it does not seem viable to call this experience Distance Teaching, as if it were the Internet that taught, or as if it were the people behind the materials that taught. What is taking place in a context such as the one described is Technology-Mediated Learning, self-learning, that is, learning that is not the result of teaching.

Consequently, the main categories in which the possible uses of technology in education can be classified are:

- In support of Face-to-Face Teaching
- In support of Distance Teaching
- In support of Self-Learning

The Justification of Distance Teaching

Many people might feel inclined to justify Distance Teaching by simply asking: "Why not?"

However, there are good reasons to discuss whether Distance Teaching is justified, what justifies it, and what its merits are relative to Face-to-Face Teaching.

On the one hand, there are those that assume that Distance Teaching does not substantially differ from Face-to-Face Teaching. If teaching is good, and it is possible to teach at a distance, then we should do it.

On the other hand, there are those who see advantages in Distance Teaching in comparison to Face-to-Face Teaching: greater reach, better cost/benefit ratio, and, mainly, greater flexibility (for both teachers and learners), since they believe Distance Teaching can become so personalized as to become individualized instruction.

Over against these two favorable positions, there are those who think that in Distance Teaching one loses the personal dimension that, even though not necessary for teaching itself, may seem essential to effective teaching.

Are Face-to-Face and Distance Teaching Equivalent in Terms of Results?

Leaving aside, for the moment, the second position, there is an obvious contradiction between the first and the third position, since defenders of the first assume that there are no substantive differences between Face-to-Face and Distance Teaching (the "virtual" character of Distance Teaching not being considered essential), while defenders of the third position believe that the "virtuality" (or remote character) of Distance Teaching removes from the teaching relation something important, or even essential to it, namely, its personal character, which, according to them, is what makes teaching effective.

Who Is in the Right in this Dispute?

A qualified agreement with the first position seems justified. Teaching involves three elements: the teacher, the learner, and that which the teacher teaches the learner (the "content"). For the teacher to teach the content to the learner, it is no longer necessary, today, that they should both be in spatial-temporal contiguity that is, that they share the same space at the same time.

Socrates insisted (against writing-based teaching) that spatial-temporal contiguity between teacher and learner is essential to teaching, but only because he did not know, and could not even imagine, contemporary telecommunications. Because of this, he claimed that distance teaching (in his case, writing-based teaching) prevented dialogue, questioning and answering, real personal communication between the agents involved (teacher and learner). His argument obviously does not apply today.

The personal character of a relationship, today, is independent of physical proximity in space and time. It is possible, nowadays, to maintain extremely personal – even rather intimate – relationships at a distance, using modern means of distance communication, involving text, sound, image (static and dynamic). On the other hand, mere spatial-temporal contiguity is not guarantee of truly personal relationships. The very large classrooms that exist in some schools often lead to a highly impersonal relationship between teacher and learners, despite their proximity in space and time. Many times, in these contexts, the teacher does not even know the name of the students and is totally ignorant of their personal characteristics, which are highly relevant to effective teaching.

This said, it must be admitted that, other things being equal, face-to-face, eye-to-eye communication allows for more effective teaching than does remote communication, even when the most modern means of distance communication are employed. In face-to-face communication one can rather easily detect the nuances of non-verbal sound expressions (the tone, pitch, and volume of the voice, the rhythm of the speech, the pauses, the subtle emphases) and of body language (especially facial expressions [in which eye contact is perhaps the most significant aspect], but also posture, hand, arm, and leg position, the possibility of touch and other forms of physical contact, etc.).

(This consideration is important for something that is going to be claimed below, namely: if a model of teaching does not work under the best conditions, why should it work when conditions are not so favorable?)

Does Distance Teaching Offer Advantages vis-à-vis Face-to-Face Teaching?

Let us consider, now, the second position described above, namely, that there are advantages to Distance Teaching in relation to Face-to-Face Teaching. If this thesis is correct, the advantages of Distance Teaching may compensate the disadvantage to which attention has just been called.

It was said, before, that the defenders of the thesis that Distance Teaching is more effective than Face-to-Face teaching point to its greater reach, its better cost/benefit ratio, its greater flexibility (both to teachers and learners), and its greater potential for personalization and even individualization.

Reach

There is no doubt that Distance Teaching has greater reach than Face-to-Face Teaching. A program of Distance Teaching such as Brazil's TeleCurso 2000 reaches millions of people each time it is ministered (broadcast) – infinitely more than could be reached if the same course were taught face-to-face.

Cost/Benefit Ratio

Here the question is not so easily decided.

The cost of developing (producing) quality Distance Teaching programs (that involve, for instance, television, or even video, or specialized software) is extremely high.

Besides this, the cost of delivery can also be reasonably high. If these programs are broadcast through commercial television networks, delivery costs can even be higher than development and production costs – with the added disadvantage that delivery costs are recurring, not one-time costs.

Because of this, these Distance Teaching programs only offer a favorable cost/benefit ratio if their reach is really great (reaching, for instance, over one million persons).

It is true that development costs can be divided by the various deliveries of the program. A quality Distance Teaching program can be delivered literally hundreds or thousands of times, while its

development costs remains the same. The only overall cost component affected by the recurring delivery of the program is its delivery cost, a fact that makes its development costs/delivery costs ratio proportionally lower as the number of deliveries increases. If the number of deliveries is not high, however, this reduction in the ratio may not be significant.

Many of the institutions interested in Distance Teaching today are searching for "shortcuts" that will reduce development costs. Unfortunately, these are rarely found without reduction in quality. Instead of using costly communication means such as television and video, these institutions are using predominantly text in the development of the programs and primarily the Internet (Web and e-mail) in its delivery (so reducing both the cost of development and the cost of delivery). In addition, lest development costs are increased, the text components are adapted from texts previously published and not prepared with the Web in view. The result is that these Distance Teaching programs are little more than correspondence courses delivered through the Internet instead of through the conventional post.

It is true that these institutions try to add some value to the texts made available through the Web offering the learners opportunities of synchronous communication with the author of the texts and with each other through dedicated chats. But chats are quite ineffective for this sort of exchange when many people take part in it.

When Distance Teaching is understood basically as a process of making written texts available through the Web and following this with discussion through e-mail e chats, it is not difficult to believe that its cost/benefit ratio will be more favorable when compared to that of Face-to-Face Teaching.

It is important to register here that if the texts thus made available are prepared specifically for the Web, being therefore enriched with structures such as links (hypertext), annotations, commentaries, glossaries, navigation maps, etc., then the efficacy of Distance Teaching can be greatly increased. But this means that teaching materials will have to be rewritten, with the consequent increase in cost.

Flexibility

Given the fact that distance teaching can use both synchronous and asynchronous communication, there is no doubt that, especially when the latter are employed, teachers and learners have greater flexibility to define the amount of time and the schedule that they are going to use for the course. Web pages, databases, e-mail are all available 24 h per day 7 days a week, and so can be accessed according to the greatest convenience of the user.

Personalization and Individualization

It is here that the defenders of Distance Teaching place greater emphasis. Here is what Octavi Roca says, in his article "Education Technologies in Educational Processes" (in Toward an Educational Technology, edited by Juana M. Sancho [ArtMed, Porto Alegre, RS, BR, 1998]):

> Most education professionals are aware of the fact that individuals are different from one another, have different needs, objectives, cognitive styles, etc., and that, therefore, each individual uses the learning opportunities that are offered to him in ways that are most adequate to his needs, objective, learning style, etc.. . . . Thus, it is obvious that teaching must be adapted to all these factors. We have known this for a long time. These differences have always been acknowledged. But, before, they were seen as problems to be eliminated – a difficulty for the teacher. . .. Now, however, we have the means to organize our teaching in full recognition of the fact that the diverse capacities of each person represent a great richness and that teaching must start from that. . .. The end result of this recognition is that teaching will be more and more adapted to each person in particular. (p. 185)

Is it possible to implement these desirable features in Face-to-Face Teaching as it takes place in the school? Maybe – but it seems very difficult, unless the school be somehow reinvented.

Let Us See School, as we know it, cannot really take into account the different needs, interests and learning styles of the learners and offer each of them personalized and individualized teaching because this kind of teaching comes into collision with a basic assumption of the school: standardization and uniformity.

To expect that the school will provide personalized and individualized teaching is equivalent to

expecting that a conventional automobile assembly line will produce cars that are personalized to the individual needs and desires of the customers. This will not work. The assembly line, as we know it, was invented to standardize, to allow that identical cars be made with speed and efficiency. The school, likewise, was created to do something similar in relation to its students. Its model is the assembly line. Its end was to be the production of individuals that, from an educational viewpoint, were as standardized and interchangeable as the automobiles produced in an assembly line. If the students preserve some degree of individuality at the end of their schooling, this will be in spite of the school, not because of its work.

The educational model (or paradigm) adopted by the school is centered on the transmission of information, from the teacher to the learner, through teaching.

This model is outdated – and it is not difficult to see why.

This model is centered on teaching. Teaching is a triadic activity that involves the teacher, the learner ("teachee"), and the content that the former teaches to the latter. Because of this the school gives priority to the content to be transmitted (the curriculum), and, consequently, to the transmitter (the teacher), leaving the learner in the last place – his task is merely to absorb whatever is transmitted to him. Because of this, the school is typically centered on contents and teachers, whereas the opposing tendency described above is centered on the learner (adapted to his needs, interests, cognitive style, and learning rhythm).

What is defective in this conventional model adopted by the school is not the fact that it takes place face-to-face: it is the fact that it is not flexible enough to allow for students with different needs, interests, cognitive styles, and learning rhythms.

Can personalized and individualized education be implemented through Distance Teaching?

If the model employed for Distance Teaching programs is the same used for Face-to-Face Teaching, we will end up having Distance Teaching programs that do not differ substantially from their face-to-face counterparts.

If it is known that this model no longer works, even in optimal communication conditions, where the teacher can communicate face-to-face, eye-to-eye with the learner, why should it work in contexts where teacher and learner have to communicate in suboptimal conditions, as it is the case in Distance Teaching?

It does not seem sensible to repeat, virtually or remotely, the errors of a model that no longer works in its face-to-face implementation. A different model or paradigm is needed.

Technology-Mediated Learning: A New Model

The model of education that will become prevalent in the information society will probably not be centered on teaching, face-to-face, or remote: it will be centered on learning. Consequently, it will not be Distance Teaching – it will probably be something like Technology-Mediated Learning.

This model will have to make provision for the different needs, interests, cognitive style, and learning rhythms of the learners. Whoever wants to participate in a nonlearner role in this model will have to make available, not Distance Teaching modules, but rich learning environments to which anyone can come and in which anyone can learn.

The Internet and the Web, or whatever comes after them, will have a fundamental role in this process.

The Internet is rapidly becoming, through the Web, a repository for every sort of information that is made public. Because of this, people will be coming to the Web to satisfy their information needs. The prevailing model, from now on, will not be some (the teachers) transmitting information to others (the learners) but many (students, workers, anyone who needs it) coming in search of information in places where they know they can find it (the Web). In Internet terms, it will be more "pull" than "push."

The task of discussing, analyzing, evaluating, and applying this information to practical tasks will be, more and more, performed not through the school, but through specialized virtual discussion

groups, where everyone can alternate in teaching and learning roles. What is virtual here is the group, not the learning: this will be real enough to satisfy most people's learning needs.

If the school can reinvent itself and become a learning environment of this type, it may survive. But the Internet, the Web, e-mail, chats, text-based discussions, video conferences, etc., will have to be in the center of it and to become a regular part of its routine. What is said of the school here applies to schools of every level, including universities.

An example of a learning environment of this type is the discussion group EduTec and the site EduTecNet, set up to discuss the use of technology in education. Its URL is http://www.edutecnet.com.br.

Educational Technology (II)

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"Educational technology" refers to a field of study and practice that is conventionally conceived in light of its two constituent words. First, it is concerned with the educational applications of technologies and not the myriad uses of technologies in modern society. Second, it examines those aspects of education that are crucially dependent on (usually new) technologies.

This conventional conception tends to lead along a path focusing on techniques: Research studies compare learning through the use of some new tool versus learning in a traditional way. Cost/benefit analyses are done to measure overall value of the new tools. Training in the use of new technologies is advocated as necessary and sufficient for educational reform. Not surprisingly, behaviorist models of learning have provided the conceptual framework for much of this work; more recently these have yielded somewhat to cognitive or constructivist models but often still with an embrace of *techne* over reflection or critical analysis.

Despite widespread use of the term, the delineation of "educational technology" is fuzzy at best. Can we say definitively that specific technologies are educational? One way to consider that question is to look at the common use of the term in different historical situations. Today, the "technology" in educational technology is usually assumed to refer to new communication and information technologies but prior to the advent of the World Wide Web it meant stand-alone computer systems or programmed instruction. Before that, people spoke of educational technologies as including film strips, television, tape recorders, globes, and other media. In some discussions, educational technology includes any device, medium, or artifact that is used for instruction, thus both the familiar chalkboard and the textbook. In others, that meaning is extended to include lesson plans, assessment procedures, essentially any form of codified educational practice. As educators have employed more tools in the classroom and as they have looked to the technologies of work practices, it is difficult to identify any technology that cannot at some time be considered potentially educational. For example, the advent of low-cost digital telescopes and the ability to access astronomical photographs through the Web has made the telescope an educational technology in many classrooms.

Alternatively, can we say that technology use is a separable aspect of educational practice? The profusion of courses, graduate programs, journals, conferences, and texts on educational technology suggests that such is the case. However, the characterization of what counts as educational technology is often left unexamined, and the uses of the term are inconsistent. A case can be made that all education involves technologies; indeed, the development of writing systems is often conceived as one of the major technological advances in human development. To the extent that education has evolved along with writing, changes in education can be characterized as the successive emergence of new forms of teaching and learning through the use of new writing tools and systems – manuscripts, printing, typewriting, word processing, email, hypertext, and so on.

It is useful to turn to work in the field of technology studies. There, at least three layers of meaning for technology are typically identified (see MacKenzie and Wajcman 1999). First, there are *physical devices*, such as automobiles, telephones, or oil pipes. Second, there are the *procedures*, *activities*, or *organizational systems* that incorporate these devices. These may be represented in user manuals but also in daily habits of users of the technologies. Third, there is the *technical knowledge* that enables particular activities, for example, the accumulation of experiences by a midwife constitutes a technology for assisting in births. The line between these layers is not sharp: Devices can reify procedures, organizations are mutually constituted by their artifacts, and activities can be viewed as both knowledge and practices. This is in fact precisely the reason why people studying technology cannot restrict their view to physical components per se.

Returning to the question of what aspects of education, if any, are technological, the layered conception of technology suggests that technology is not a separable component of educational practice, but rather, a perspective, or set of perspectives, one may adopt on all educational activity. Some of the major perspectives are these:

First, educational technologies can be viewed as *texts*, as symbol systems to be interpreted by users. This perspective has led to a variety of analyses in the tradition of literary criticism. The prevalence and power of technologies as bearers of meaning leads, for example, to Heidegger's question concerning the essence of technology. His concept of *Gestell* (enframing) inscribes technology as a mode of thought prior to the scientific revolution, one which "reveals being" in a particular way. Thus, people are defined by the technological way of thought, and not simply users of technological devices.

More recently, Reeves and Nass present a different notion of reading in their concept of the media equation. They argue that people treat computers, television, and new media just like real people and places. They carry over to the technological realm the social norms of gender, language, honesty, politeness, and so on that they employ in social interaction.

As different as the Reeves-Nass analysis may be from Heidegger's, both recognize that technologies are cultural formations and that their design, distribution, use, and interpretations need to be considered within a sociohistorical perspective and not merely a technological one (see Bruce and Hogan 1998).

A related view sees educational technologies as *bearers of power relations* in society. The essays in Bromley and Apple's collection address this point across issues of gender and class and in terms of the teacher as a worker using technologies. Disembodied power is implicit in Heidegger's analysis and perhaps most strikingly in Ellul's notion of la technique. By "technique" Ellul means not simply particular methods for employing a given technology but the inexorable force of a technical way of thinking that threatens humanistic values. Foucault of course is widely associated with the notion of power as exercised through discursive practices. The layered account of technology then accords well with his analyses of the devices, activities, and knowledge needed to maintain institutions such as prisons.

Not all analyses of power in computing take the bleak road. In fact, the beneficent use of "power" and "empowerment" in the discourse about education technology is striking. For example, a widely read US government report (*Power On!*) makes a deliberate play on the idea of electrical power for computers as a way to empower learners. Interestingly, both those alarmed by the uses of new technologies in education and those enthralled by them see a strong linkage between the tools and their meaning, sometimes to the point of becoming technocentric.

Another view of educational technologies argues that the *context of use* is critical for understanding. This perspective leads to the idea of cultures of computing (Star 1995), as opposed to tools with effects that can be considered in isolation from the beliefs, values, norms, roles, and other practices inherent within a social system. It also argues for *situated evaluations* (Bruce and Rubin 1993) of technology use, in which the first task is to determine what a technology is, not to assume that it can be specified independent of a specific sociohistorical context.

In the last decade, a number of writers have extended the biological concept of ecology to that of *information ecologies* (see Nardi and O' Day 1999). From this view, a particular technology, say a computer connected to the Web, must be understood as operating within a complex system comprising people with different bases of knowledge and purposes; organizational rules and procedures; physical components such as walls of a room, tables, and chairs; and various other devices such as clocks, lighting, paper and pencil, and other computers. Here again, the benefit of the technology cannot be ascertained independent of a larger system.

Perhaps the dominant view in current discourse about new communication and information technologies is that of *media*. Not only are there obvious links from the book to television to the Web as media for conveying information, but also many educators are drawn to the *media*tional function of these new media. Extending Vygotsky's sociohistorical theory, they see new technologies providing affordances for learning. They *mediate* between students, between student and teacher, and among task, resources, situation, and student.

One of the most productive views of technologies, especially educational technologies, comes from Dewey (see Hickman 1990). For Dewey, a technology can be seen as a means for resolving a problematic situation, including any impasse on a path of inquiry. That means for resolution can be a physical device, such as a calculator; a representational device, such as the exponent to indicate raising a number to a power; a revised procedure; or a new conception. The appeal of this view is that it provides a unified account across artifacts, procedures, and knowledge. In addition, it shows a way to think of educational technology use in relation to technology use beyond the classroom.

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Educational Theorists

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In 1989, Helmut Peukert organized in Hamburg an intensive seminar on the work of Wilhelm Flitner at the occasion of his hundredth birthday. Flitner who was to die 1 year later had been teaching for almost 30 years in Hamburg and was one of the leading figures of the so-called

Geisteswissenschaftliche Pädagogik. This was a crucial tendency in educational thought which has been very influential far beyond German borders throughout a large part of the twentieth century. And although there are, no doubt, very dubious and questionable aspects related to the entanglement of at least some of its representatives in the NS policies and ideologies, there is also no doubt that the "Geisteswissenschaftliche Pädagogik" has played a very important role in the exploration of the possibility of the elaboration of autonomous educational thought.

It is no surprise then that the central question of the seminar in Hamburg concerned the place of a "general educational theory" ("Allgemeine Erziehungswissenschaft"). And that the central reference was to Flitner's phrase that such a theory relies on a "basic pedagogical thought" ("einen Pädagogischen Grundgedankgang") which brings different central and *internal* pedagogical concepts into relation such as "*Bildung*," "Bildsamkeit," "Bildungsweg,"and "Bildungsziel" (see Peukert 1992). In fact, the seminar closed a decade in which German philosophy and theory of education ("Allgemeine Pädagogik" or "Allgemeine Erziehungswissenschaft"), after the emergence and tremendous flourishing of critical and emancipatory pedagogy in the 1960s and 1970s, felt itself increasingly colonized by sociology and critical social theory (reducing education in one way or another to ideology or socialization and disciplinary power). It was also a decade also in which it was confronted with what it considered to be a worn-out idea of individual emancipation and a pointless critique of education (as "oppressing" theory and practice) that seemed to imply even the end of educational theory and of education as such, as proclaimed by the anti-pedagogy declarations ("Anti-pädagogik"). In 1983, Klaus Mollenhauer's "Vergessene Zusammenhänge" (in 2014 translated in English as "Forgotten Connections") had been one of the first attempts to explicitly deal with these issues. He explicitly stated that the so-called Anti-Pädagogik offered one of the reasons for writing the book. Another crucial reason is the apparent "pathlessness" or aporia in which, according to Mollenhauer, educational theory had landed, leading him, one of the most

important German educational theorists, to state 5 years later that thinking about "*Bildung* und Erziehung" has become so difficult that we might even say that the pedagogical era has come to a provisional end (Mollenhauer 1986, p. 7).

Nevertheless, Mollenhauer remained strongly concerned for the development of an autonomous educational or pedagogical thought and maintained that we should continue to address the "basic set of pedagogical issues" that nobody can ignore who is dealing with education. It was one of the reasons that he was also present at the aforementioned seminar in Hamburg in 1989. And it is clear that Mollenhauer was establishing himself consciously a (today maybe somewhat "forgotten") connection to a tradition of educational thought that started with Schleiermacher that was clearly present in the "Geisteswissenschaftliche Pädagogik" and wanted to identify some basic and particular "features," which would characterize the educational phenomenon and the pedagogical relationship. This should offer the starting point for the elaboration of a proper educational thought or general study (called "Allgemeine Pädagogik" or simply "Pädagogik"). It is also in line with this tradition that Johann Friedrich Herbart claimed and elaborated "einheimische Begriffe" ("internal concepts"); that Wilhelm Flitner suggested and requested, as we mentioned before, a "pädagogischer Grundgedankengang" ("basic pedagogical thought"); and that Martinus Jan Langeveld stated that educational thought ("theoretische pedagogiek") is no philosophy but "pedagogics" ("Pedagogiek") and proposed the "animal educandum" as the constitutive pedagogical-anthropological "fact." But, undoubtedly, also people in other places of the world such as Paulo Freire or John Dewey have been part in this endeavor to invent, create, or establish a particular mode of thinking (conceptualization, problematization, argumentation, criticism) that engages directly with the phenomenon of education and tries to explicate some of its characteristic features.

For us today, taking up or reenacting this intellectual endeavor to indicate a proper place for educational thought seems crucially relevant.

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Indeed, in a time where we are confronted not only with a sociological or ideological colonization but with the omnipresence of (bio-) psychological approaches (including the apparently unavoidable "learning discourse") toward the educational field and, moreover, with an ever-pervasive emptying of traditional frames of reference, the question of "elementary pedagogical issues" and of a proper educational thought deserves to be taken up and emphasized once again.

However, we would like to point also to the risk of a particular philosophical "colonization" of educational thought. Indeed, explicitly taking distance from psychological, biological, or even sociological approaches to education is to a large part central to the actual self-understanding and self-definition of philosophy of education. But one of the reasons for reemphasizing the importance of the tradition of educational thought "proper" is that philosophy of education and educational theory, having the tendency to rely on philosophical master thinkers such as Habermas, Wittgenstein, Levinas, Lyotard, Agamben, Rorty, Arendt, etc., run the risk to be trapped in a movement of instrumentalizing or even marginalizing education and learning. The risk is that education and learning are considered to be foremost a field of application for theories developed elsewhere and for other purposes or to be a field of practice with a function or meaning that is only to be derived from other noneducational practices.

While philosophy of education is often engaged in great efforts to disentangle the complexities of the work of the master thinkers, education and learning are often turned into a field of application, if education and learning as well as a genuine educational concern are not completely marginalized. One could oppose to this thesis and argue that almost all of these philosophies and theories acknowledge themselves that learning and education are important and some of them even explicitly invoke learning processes (Habermas 1981), learning curves (Latour 2004), learning (Sloterdijk 2014), childhood (Lyotard 1988; Agamben 2002), or teaching (Levinas 1998) as crucial phenomena to clarify their understanding of our world and our being. Our thesis is,

however, that this focus on education and learning is often motivated by another than educational concern.

In this respect, we can distinguish between different kinds of philosophers, first, the *learning philosophers* (e.g., Habermas, Latour, Sloterdijk) for whom education and learning seem to be notions that indicate a process of change. However, they always in one way or another postulate these notions as needed to save or Mollenhauer 2014 close their ethical, political, or social intellectual project, that is, to explain how ethical, political, or social changes come about. As such, educational change and the educational meaning of change are either being ignored or ridiculed. And if it is conceptualized, in one way or another, education is narrowed to a form of socialization (habituation, acquisition) or – in progressive circles – an attempt to counter-socialization. Ultimately, the social and cultural theories of these *(social) learning philosophers* are theories about grown-ups and about how adults need learning but without becoming a child. Secondly, we could speak about "enfance/infantia" philosophers (e.g., Lyotard, Agamben). Without going into detail, and hence doing injustice to the complexities of the work of these authors, we do think their references to education and childhood often become *images* or *metaphors* to think about what is at stake in adult life. For them, education and learning are at least not the key concern. And if their thoughts are translated to (philosophy of) education itself, it is perhaps not a surprise that education runs the risk of being framed in therapeutic or ethical terms. The risk is a kind of personalization by putting in one way or another a dialogical or analytical relation between persons, that is, the person of the teacher and the person of the pupil, central stage. The pedagogical key issue is not turned into an issue of socialization or counter-socialization but becomes the act of "doing justice" to someone (or even to enfance/infancy as such). In a different way, for sure, we can relate, thirdly, also some *teaching philosophers* to this ethical framing of education. Although we also cannot render it in its complexity, we could point here for example to Levinas' use of the *teaching* metaphor to describe the way

the ethical demand is inscribed before the subject comes to itself (Levinas 1998). It is a description which in the context of philosophy of education is often turned around so to say, to understand teaching as quasi-identical with an ethical relation. An ethical framing of education is very often related to an understanding of ethics in terms of being summoned before the "face of the other" as the "Law" beyond any law. Perhaps another version of this ethical teaching philosophy is the work of Judith Butler (2005) on the decisive role of an act of interpellation in the constitution of subjectivity. In line with this, there is the interpretation of the act of teaching as working according to the logic of interpellation and focusing on the relational and performative dimension of the child's subjectivity. Furthermore, such enfance/infancy philosophers and teaching philosophers, perhaps, should be distinguished from *game philosophers*. Again without claiming to make a final statement about the complexity of his work, we could think of Wittgenstein (1965), with his concept of language game being the most telling one. Probably here, the focus and concern are already much more on the practice of education, although the experience of education itself and the specificity of educational and learning events and relations are much less outspoken. Education along these lines is not a matter of socialization or capacity to act but a matter of initiation.

As we indicated before, while all these philosophies and theories acknowledge that childhood and change through education are important and while they are postulating the existence of conditions of childhood and childish conditions, education and childhood are at once "instrumentalized," be it as a temporary condition, a necessary evil, or a logical factor in view of ethical, political, or social change or be it as an image or practice to conceptualize what is difficult to conceptualize in adult life. The risk of/for philosophy of education and educational theory is to be trapped in the same movement of instrumentalizing or even marginalizing education and naturalizing learning. And a maybe unexpected example is offered by the meanwhile influential distinction by Biesta (2009) between qualification, socialization, and subjectification. For him, these are the three functions or roles of education, and often all three of

them are playing a role. Clearly, Biesta wants to focus on the role of subjectification – becoming a person, by finding a place in the world – against the often dominant roles of socialization and qualification. The critical question, however, is whether these are the three roles or functions to be distinguished when looking indeed at education from a pedagogical/educational perspective. Although we recognize for sure that Biesta contributes importantly to emphasizing the role of education in a time of learning, we think this is not the case and that the distinction is the result of combining the three different approaches which are all external to education. It seems as if the qualification function pops up when looking at education from an economic perspective, while socialization (and the process of integration in social norms and values) is the key term when looking through sociological lenses. Subjectification, then, is what appears when approaching education either politically (in line with a certain reading of Rancière: becoming someone which is at the same time challenging the existing social order in terms of equality) or ethically (in line with a certain interpretation of Levinas: becoming someone which is always motivated by a call from the other in terms of doing justice). We think that qualification, socialization, and subjectification represent three versions of taming education: an ethical-personalizing or political-equalizing taming of education that imposes ethical or political standards on change (subjectification), an economical one that imposes an exchange value or investment calculus (qualification), and a sociological one that tames educational change by imposing the rules of social and cultural reproduction – or in a progressive version – the rules of social renewal and change (socialization). In one way or another, part of this taming is that a specific "destiny" (natural, or social, cultural, political, etc.) is put forward as the horizon to think about education or about change through education. From a pedagogical/educational or "internal" perspective on education, we think it is important to link up with the basic idea that human beings have no natural or other destination, and education in one way or another is exactly about "finding" one's destiny.

In order to strengthen such an internal perspective, i.e., a pedagogical or educational approach and to do justice to the phenomenon of learning and education itself, we suggest that it would be helpful to deal with some major issues in educational philosophy and theory returning to some "early modern" and "modern" key figures in the field of education. It is the authors who have developed an *educational* approach or theory, contributed to an *educational* vocabulary, and expressed a deep *educational* concern in their intellectual but often also their practical work. Some of these figures are really broadly renowned (such as Comenius, Herbart, Dewey, Buber, Peters, Freire, Mollenhauer) and others less known (such as Rodrigues, Deligny, or even Ortega y Gasset and Langeveld), at least in the western Anglo-Saxon and German context. We deliberately mention "educational theorists or thinkers," or at least philosophers or educationalists who did some substantial work in educational theory or educational philosophy. To give voice again to these authors and their educational ideas would be the first ambition, but not the only one. Another aim would be to show that educational theory and philosophy is not just "applied" philosophy (or any other applied discipline), but could be regarded as a particular mode of thinking including specific forms of problematization and conceptualization. This means that we do not need some extended biography or an extensive bibliography of these key figures, but rather descriptions or indications on the "ethos" and "approach" of these educational theorists and thinkers. What we need is a specific attention on the mode of thinking (conceptualization, problematization, argumentation, hesitation, criticism) through which each of these key authors discusses or engages with the phenomenon of education and the related practices, theories, and discourses. Without exception, the work of these key figures is a way of finding a proper answer to what was at stake in their present, in view of their past and future, and in ongoing discussion with practices of education and other voices in educational theory and philosophy. We could thereby draw attention to the

force, creativity, and originality of their ideas and carefully show or expose what is "educational" in their work and what is still "topical" (without pointing directly at relevance). This could help us to show how educational thinking is not only an abstract (mental) activity but somehow always involves a particular relation to (or care for) oneself, others, and the (educational) world. As such, it could contribute to the development and elaboration of thinking and practice, a "language" of education, and learning itself.

One important issue that such an elaboration of a "language of education" entails considers the aspect of translation. Indeed, although it applies for many fields, especially this field of "educational thought" or philosophy of education deals with serious difficulties of translation, since they concern essential notions such as "pedagogy" and "education" itself. It is, for instance, problematic to translate the German "Pädagogik," the Dutch "pedagogiek," the Spanish "pedagogia," or the French "pédagogie" with the English "pedagogy." In other languages, pedagogy is not restricted to school education but refers to acting and relationships in other spaces of learning as well. And even when used in relation to school education, in other languages, it can refer to aspects of schooling that have to do with broader aims and practices associated with becoming an adult or becoming a person. An even bigger problem is related to the notion of education. The English term has a broad meaning but remains at the same time closely associated with formal education. However, it is important to keep in mind that it often has a specific meaning and that therefore there is in fact often a hesitation whether to use the notion of "educational" or "pedagogical." And let us, lastly, point to the (German) notion of "*Bildung*" which is now also increasingly appearing and discussed outside the German context (or the context strongly influenced by it). Although attempts at translation have been tried by philosophers and historians, the notion actually remains mostly untranslated and seems on the way to become part of the language of education more broadly and generally, apparently being able to articulate

concerns that transcend the German context to which it was connected.

To conclude and summarize, we think that, in order to confront and think our educational present, educational or pedagogical thought should not only distance itself from sociology, psychology, or economy but also from ethics, politics, and – and this is the main point we wanted to make – also philosophy (at least philosophy limited to master thinkers). It is not because we consider these disciplines and approaches as unimportant or irrelevant, we do not at all, and we do acknowledge for sure the importance of philosophy but because it could help to elaborate a language, problematization, and conceptualization of education and learning that is itself educational, especially when being today under the spell of the "learning society."

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Educational Theory

▶ Philosophy of Education and Science Education

Educational Theory: Herbart, Dewey, Freire, and Postmodernists

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Three Revolutions in Educational Theory

In the nineteenth century, we learned with Johann Herbart that motivation depended on our intellectual apparatus. Then, we built the teaching of thinking into a lesson that started with a scientific or moral issue. The students, since they had a good intellectual apparatus, a good mind, would be able to follow the lesson. Motivation to study would appear in so far as the students themselves used the intellectual apparatus. The teacher would give the matter, in a logical or historical form, and the students, naturally, learned this form. There was the supposition that the mind was a logical thing and the matters of the lessons should be showed in a logical or historical way.

The great revolution in teaching by the end of the nineteenth century and the beginning of the twentieth century was a revolution made by John Dewey. He developed several critiques of old pedagogy. The main critique was that the intellectual apparatus didn't work alone. The intellectual apparatus, Dewey said, actually depended on motivation. Lessons constructed in a logical and/or historical way needed to be changed. The lessons should be put in a psychological way. So, Dewey took once more a theme from Comenius and Rousseau. Lessons should start with the problems of the world – problems that brought interest and motivation for the children. The teachers, of

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course, could show the logical and sequence of an issue, but they should know that the child learns this only after a translation of the topics in a psychological way.

This revolution was a potent event. It quickly put Herbart in the past. Of course, a lot of teachers continued doing things in the way Herbart had fixed, but the new books about pedagogy started to tell new things. They told that the child thinks! The books said "the way a child thinks is not wrong, but the child thinks a different way." Logical and historical ways of teaching should be under the control of the psychological and sociological way of teaching. Dewey and Kilpatrick made a great contribution to teachers and the beginning of the twentieth century: they brought the child forward to become the central point of the school and of teaching. Then, educational theory could gain force from the new psychology and sociology. If Herbart epitomizes the nineteenth century as a century of collective education, so we can say that Dewey epitomizes the twentieth century as a century of pedagogy – philosophy of education and science of education together.

But the twentieth century didn't see only this. The twentieth century, mainly after the Second World War, watched the emergency in the scene of the Third World. In several countries, a close colonial-type relation with the metropolitan country came to an end, and in the democratic world, the welfare State appeared like an ideal. As a consequence, I see the important appearance of poor and "odd" children inside schools and with this a third moment in the educational theory in the world in the twentieth century: the pedagogy of Paulo Freire.

Paulo Freire didn't disagree with Herbart about teaching as something that should be done in a collective fashion. He also agreed with Dewey, of course, about motivation, psychology, and sociology. But the new ingredient inserted by Freire into the games of educational theory was the political ingredient.

Freire said that pedagogical action should be a political action but a specific political action: action to make humans free. Dewey also wanted this. But Dewey believed that education and

social democracy walked together. For Dewey the concept of education only made sense in a democracy. Paulo Freire on the contrary, thought of education in a situation without democracy. He thought of education in a place without democracy and thought of education as being like a motor to achieve social democracy. So then, with Freire, educational theory finished a cycle – the modern age in educational theory.

What I wanted to show is that in the nineteenth and twentieth centuries, there were three revolutions in education theory. The first revolution: pedagogy became a science of education with Herbart. The second revolution: pedagogy should be linked to social and psychological life problems with Dewey. Finally, the third revolution: pedagogy would depend on political perspective in order to help the poor people.

But, before the end of the twentieth century, the twenty-first had already started. A new and fourth revolution in pedagogy is in course: the postmodern educational theory.

The Postmodern Age and the Narrative Turn

I think that two books are the protagonists of this new movement: in 1979 the publication of *The Postmodern Condition* by Jean François Lyotard and in the same year the publication of *Philosophy and the Mirror of Nature* by Richard Rorty. I do not believe that Herbart would understand these books. I don't know if Paulo Freire read these books. But I imagine that Dewey would have liked these books. These books didn't come to tell us that Herbart, Dewey, and Freire were wrong. They came out to say that educational theory could become more open and free.

My friend Michael Peters likes Lyotard. I also like Lyotard, but I think that Lyotard and Rorty are in agreement in several points, at least in those points that I would take to make educational theory.

Very briefly, what Lyotard and Rorty said in those books is the following.

Lyotard reminds us that a lot of people already did not believe in metanarratives. Therefore, it was

useless that we, the philosophers of education, continue to tell metanarratives to teachers. The teleology of Adam Smith, Hegel, or Marx is a thing of past. They could no longer support all or any educational theory. When I read Lyotard I didn't think that his book implied that Herbart or Dewey or Paulo Freire need be given up but that they need to be read without the foundationalist perspective that we are accustomed to read.

Rorty also reminds us that a lot of peoples did not believe in metanarratives and a lot of philosophers in the pragmatist movement could be used to show that real and technical motifs exist in philosophy which discredit metanarratives. But Rorty, in a stronger way, showed me that Herbart or Dewey or Paulo Freire could be used in a new way to make education. They loved to tell stories about education and loved to talk about books that could make us pay attention in stories, movies, novels, comic books, and music about educational situations. Therefore, I understood that we need rather a cultural appeal to teachers than a new or old educational theory.

Might I be talking about "cultural studies," as Giroux and others are doing? Might I be talking about "counternarratives," as Peter McLaren and others are doing?

Giroux and McLaren's books are to be appreciated. They continue the critical perspective learned from Marxism and that is useful both in the Third and the First World. But what I understand as a postmodern educational theory is another thing. In a lot of places in the Third World and in several places in the First World, the training of teachers – poor or rich – is done with educational theories. But what I don't see in such training of teachers in educational faculties is work with culture: novels, classics, tales, movies, comic books, pictures, and so on. Teachers in various parts of the world are trained in educational theories, in a good or bad way, depending on the country and the university. I believe that is wrong. Better educational theory would say that Herbart, Dewey, and Paulo Freire can be read and must be read, but this is useless without Henry James, Nabokov, Machado de Assis, Julia Roberts, Plato, Donald Duck, Ben Hur, Hilary Clinton, The Simpsons, Umberto Eco, Celine Dion,

and Caetano Veloso. Our teachers, in a world that asks for narratives without metanarratives, do not know tales, films, comic books, and so on. For economic reasons in several places and because of the overwhelming value given to educational theories in other places, our teachers forget the main thing in the school: the culture.

In Brazil, in several universities, in the faculties of education, a lot of teachers who train teachers for elementary and high school don't know our best writer, Machado de Assis (now translated into English). Is this a situation specific to Brazil? No! There are several studies that show that our teachers who train teachers have no love of culture. That is the problem: in a postmodern age, if we want to tell stories that can help the different peoples be close – the ideal multicultural of the postmodern age – then we should have good stories from the several cultures in our hands. But our faculties of education are occupied with educational theories and, so, don't bear in mind the narrative turn of our age (see Martin 1993, pp. 124–143).

The Educative Process in a Comparative Ways

Now, I will try to put what I said into a systematic form, comparing the educational process of the educational theories that I quoted. I will put this in a frame below.

Herbart educational theory (three steps)	Dewey educational theory (three steps)
1. Lesson of yesterday	1. Survey about concern of the students
2. Lesson of yesterday linked to lesson of today. Presentation of the new matter. Theories and examples of questions and answers	2. List of the problems about the concerns of the students. Hypothesis about the problems with suggestion of readings
3. Exercise with new questions	3. Ideal experiments or experiments in laboratory
Freire educational theory (three steps)	**Educative and pragmatic action in the age of narrative turn (three steps)**

(continued)

1. Survey about common words and issues of community	1. Presentation of cultural, cross-cultural, ethics, and political problems with movies, novels, tales, comic books, music, and so on
2. List of the words and issues of the community. Making problems: making "normal" problems in political problems. Discussion of solutions	2. Relations between the problems above and the problems of the students' life. Presentation of theories and philosophies (as narratives) about the problems
3. Political action	3. Action: cultural, social,, and political. This action can be the making of other narratives (including narratives with metaphors) and other problems

In the Herbart educational theory, the teacher leads the process. The student pays attention and works on the exercise. The student does the exercises following the models given by teachers. Dewey changed this. In the educational theory of Dewey, the main concern is the students. Furthermore, Dewey insisted on the formulation of problems and hypotheses. Dewey wanted the learned to act like scientists. Freire put the educational process in the hands of militant "teachers." He wanted the "students" as men and women with ability to think political problems and start political action (see Ghiraldelli Jr. 1990).

In my idea about an educational theory in postmodernity, the teachers are teachers and the students are students. The teachers lead the educational process, but they should be very sensitive about the problems of our age, and they should be very able to realize that the problems can't be given without means like the movies, tales, novels, comic books, music, and so on. Then, the educative work is a process of identification between the problems of life of student and the problems shown by means of the cultural material. The teachers supervise, in the end, the production of political, social, and cultural action. This action can be a production of a text, of course. The text made by students can be a normal text but can be a metaphorical text. In this case, the teacher should pay attention to the metaphors. Metaphors, as

Rorty says, are indicative of opportunity to invent new rules and new rights in democracy (Ghiraldelli 1999).

Interpretations in the Educational Theory in the Age of Post-narrative Turn

The problem about this new way to see educative action that I am proposing is in the interpretation. If we see "the reality" by means of the narratives, then what is the correct interpretation?

I would prefer that the teachers didn't follow this line of reason. Of course, we must agree about several things. But the main idea in educative action in the age of the post-narrative turn is that we, the teachers, should know the narratives very well. The main aim in this new way in which we construct the training of teachers is that all narratives should be pointed toward the end of cruelty. So, interpretation needn't be a special key to find the truth of the narratives. But, interpretation needs a key to drive the students in the identification of cruelty, and, more than this, we must put into the work a strong hand against the cruelty.

I am not thinking about a method of training teachers to be greatly learned – this was the aim of the nineteenth century. I am not thinking about a method of training teachers to be trainers of scientist – this was the aim of the twentieth century. I am not thinking about a method of training teachers to be political militants – this was the aim of several peoples in the twentieth century. I want to train teachers to be people that believe that a demon can't be a good professor. The demon would be a good teacher if knowledge held only technical aspects (of learning, science, politics), because the demon can be an intelligent animal. But in a new perspective, the important thing is the end of the cruelty, and this, the demon can't wish (in a meeting of philosophers in Brazil, in homage to Deleuze, all the philosophers present agreed that the new problem of philosophy was cruelty).

However, some objector might say: you want a kind of teaching with good intentions, and with this I agree, but if the teaching is given by stories, we are in the field of relativism.

This text isn't a technical text of philosophy of education. So, I will avoid a great discussion about objectivity. But I think that all people who are thinking about relativism should pay attention to the words of Davidson:

> Should we then agree with Hans-Georg Gadamer when he says that what the text means changes as the audience changes: "a text is understood only if it is understood in a different way every time"?. I think not. There can be multiple interpretations, as Freud suggests, because there is no reason to say one rules out others. Gadamer has in mind incompatible interpretations. It is true that every person, every age, every culture will make what it can of a text; and persons, periods and cultures differ. But how can a significant relativism follow from a truism? If you and I try to compare notes on our interpretation of a text we can do so only to the extent that we have or can establish a broad basis of agreement. If what we share provides a common standard of truth and objectivity, difference of opinion makes sense. But relativism about standards requires what there cannot be, a position beyond all standards. (Davidson 1993, p. 307)

If we pay attention in the words of Davidson, we will see that relativism is a ghost. Do we believe in ghosts? People that believe in ghosts can't understand anything beyond Herbart, Dewey, and Freire. But people that don't believe in ghosts can understand very well a new way to think about the training of teachers in the next century. I call this "training of the training of teachers in an age of the post-narrative turn."

What Davidson says is the following. All and any people in our age, in a democracy, admit that "difference of opinion" makes sense. Difference of opinion needs common standards that we share – this is our intersubjectivity. But relativism requires all and any position to be a different position and to be equivalent at the same time. This would eliminate our common standard that we share and would become the "difference of opinion" a logically impossible thing.

I think that Davidson's argument is enough in our case. Teachers, students, and cultural means and work have several things in common. These commonalities allow our educative conversation and, of course, our development toward knowing if our problems are better understood with a Disney story or a Henry James story. Then, in my

conception of the new educational process, or in our new educational theory, there is no place for the fear of "cultural industry," as it appears in the old Frankfurt School. Cultural programs that show us "reality" have different viewpoints, as we have different viewpoints. But, although we have our differences, we can understand each other, of course.

My arguments here do not jettison Herbart, Dewey, and Freire. I think that Freire and Herbart would not understand my position concerning relativism, but they would accept my love of narratives. Dewey would not have problems with my position on relativism, I think, but, perhaps, he would say that "reality" is a thing more real than the books, movies, tales, and music can tell us. I think not. "Reality" in education is a cultural reality. Is it a postmodern educational theory? That is what I believe.

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Educationalisation

▶ Educationalization of Social Problems and the Educationalization of the Modern World

Educationalization

▶ School Development and School Reforms
▶ Teacher Education at the Intersection of Educational Sciences

Educationalization of Social Problems and the Educationalization of the Modern World

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Synonyms

Educationalisation; Pedagogisation; Pedagogization

Introduction

The catchword "educationalization," which enjoyed some popularity around 1920, has been used increasingly since the 1980s, first in the German and then in the Belgian and English discussions. Although the uses of and intentions behind the term are far from identical, they all express a perceived intersection between distinct social practices, one of which is education. As a rule, this intersection is interpreted as assigning education the task of coping with perceived social problems. Accordingly, the most popular expression of this mode of thought has been labeled, in an abstracting way, the *educationalization of social problems*. This entry builds on that but suggests a more comprehensive view, less reactive in character by claiming that since the eighteenth century the construction of modernity, progress, and open future depends on an idea of education that promises to be the engine of modernity by means of (new) and broadly disseminated knowledge and technologies and, at the same time, an instance of moral reassurance empowering the individual exposed to these modern conditions and their moral hazards to act morally or virtuously. *Educationalization of the modern world*, in this more comprehensive way, is a key concept for understanding and deciphering the grand narratives of modernity and the modern self.

Educationalization of Social Problems

Even though the label *educationalization of social problems* has been popular internationally for less than 10 years (Smeyers and Depaepe 2008), the notion goes back to a German discussion in the 1980s under the label *Pädagogisierung sozialer Probleme* (see Proske 2001). The matter itself, however, is much older and refers to specific issues of hygiene, economy, delinquency and prisoners, and, later on and very broadly received, children's sexuality, *pédagogisation du sexe le l'enfant*, or pedagogization of children's sex (Foucault 1978, p. 104).

Beyond these explicit uses of "educationalization" the issue itself is omnipresent. Sunday schools and Bible classes were organized for workers in the first half of the nineteenth century to prevent moral decay in light of a monetary economy; most automobile drivers in the world attend driver education classes and have to pass a test – institutionalized in Germany as early as in 1902 –, and children of all ages have traffic education at school to protect them against the dangers of increased motorized traffic. These more gradual processes of educationalization are supplemented by more tangible events. When, for instance, the United States saw their nation and the Western world at risk after the launch of Sputnik by the Soviet Union in 1957, it educationalized the Cold War by passing the very first national education law, the *National Defense Education Act* in 1958, expressing the view that "Education is the First Line of Defense" (Rickover 1959). And when, a few years later, the environment had become an affair of public concern, for instance triggered by the book *Silent Spring* (Carson 1962), endangered nature became educationalized, as expressed, for instance, in the *Journal of Environmental Education* (1969) and in educational trails teaching walkers about nature. And when again a few years later in the United States the national crises after the Vietnam War, the oil crises in the 1970s, and the near collapse of the automobile industry in the early 1980s led to the perception of *A Nation at Risk* and the conclusion of an *Imperative For Educational*

Reform, this expressed the educationalization of economy and economic policy. A rising teenage pregnancy rate in the 1960s led to an educationalization of sex through the introduction of sex education in schools, which gained new urgency with the outbreak of HIV/AIDS in the 1980s. Museums were made more attractive by the invention of museum education around 1990. And when immigrant adolescents in the suburbs of Paris and Lyon protested violently in 2005, their behavior was not seen as a reaction to their poor living conditions or poor life chances but as an expression of the wrong education, as France's Prime Minister Dominique de Villepin stated in 2005. Human life is a site of what UNESCO has called "lifelong learning" and propagated since 1962, a phenomenon that was critically noticed (and explicitly labeled "educationalization") as early as in 1929 (Fischer 1929, p. 286).

The expansion of the education system in the 1960s and the 1970s as a Western expression of the educationalization of the Cold War also led to a process self-reassurance of the educational sciences, in which the explicit notion of "educationalization," or *Pädagogisierung*, started to serve as a (self-)analytical tool. In this context the notion of the educationalization of prison inmates has been discussed, profiting of course from the immense discussion of Foucault's account of the *Birth of the Prison* (Foucault 1977). Additionally, relevant research focused on educationalization phenomena in all kinds of contexts, for instance, in human resources, in marketing, and even in developing city districts, and, of course in developing the Third World (see Proske 2001).

Based on these German disciplinary (self-) reassurances, the Belgian historian of education Marc Depaepe suggested using "educationalization" as a key concept to understand fundamental processes in the history of Western education and dedicated a large part of his research to this idea in the first decade of this century (see Depaepe 2012). Depaepe invited also philosophers of education to participate in this disciplinary self-reflection of education (Depaepe and Smeyers 2008; Smeyers and Depaepe 2008), focusing on the *educationalization of social problems*. The discussion proved to be fruitful in detecting actual educationalization of phenomena such as health, the family and the child, or even philosophy or educational research. By pointing at the fact that *educationalizing social problems* continued to be a part of the educational culture even though schools have repeatedly proven that they are an ineffective mechanism for solving these problems, David F. Labaree (2008) pointed to a larger cultural context than education itself; it is precisely here that the term *educationalization of the world*, a process starting in the long eighteenth century, gets a distinct meaning with regard to the *educationalization of social problems*.

The Educationalization of the World in the Long Eighteenth Century I: The Challenge

Up to the mid-eighteenth century, it was not at all "normal" to interpret perceived problems educationally – that is, to assign the solving of problems to educational practice. What then made this educationalization, this educational turn, possible? This development had very specific requirements that have little to do with education; the increased educational reflexes were reactions to problems that were originally perceived as non-educational. Decisive for the educational turn were changes in the way that people thought about two fundamental things in interpreting their lives: first, how people imagined history and development and second, how they viewed the relation between money and politics. Both of these transformations, which remain important today, occurred around 1700 and replaced older perceptions and core notions that went back to the ancient world. They mark the transformation of the early modern period in history to the modern period. The first of these transitions (history and development) was initiated in France, the second (money and politics) in England. Both together created challenges, "problems," that were addressed in many ways, and the educational way seems to have been deemed the most promising, with effects up to today.

The transformations in the perception of history and development were initiated in France at the court of the King Louis XIV in Versailles, when the ancients' way of looking at things came under attack in the "quarrel of the Ancients and the Moderns." Whereas up to the end of the seventeenth century, time and thus history had been seen, in analogy to the seasons, as an eternal cycle of events; in the eighteenth century a linear way of thinking ("progress") came to prevail that was oriented towards the future and in which outcomes were open. At first, around 1680, this optimism applied only to progress in the sciences, but soon after, progress was seen also as a social and political program: Humanity would develop progressively towards peace, justice, and bliss, and political conditions that impeded this progress had to be destroyed. This was the justification for the French Revolution of 1789. The most impressive interpretation of this rational thinking on progress is probably that in *Outlines of an Historical View of the Progress of the Human Mind* by Marquis de Condorcet (1743–1794). According to Condorcet's interpretation, the French Revolution was the gateway to humanity's final great developmental epoch.

The second transformation has to do with the relation of money to politics, which changed towards the end of the seventeenth century at first in England. Up to that time, an ideal had prevailed in Europe according to which dispassionate reason was supposed to guide politics. At the same time, the commercial economy had been considered as something "lower" or "baser," because it was accused of diverting attention and interest away from the common good and of exposing people to the passionate pursuit of profit: In this system of thought, calm, rational governing was seen as good and passion-driven money-making as bad. But around 1700 and up to the present day, this system of thought was lost, not least because the commercial economy had become a social fact and actually very important for politics. This ideological bias – the idea of dispassionate reason as a condition of good politics and the actual importance of the discredited commerce, connected to passions – had to be

solved in order to legitimate the systems of political power, which depended more and more on money (for instance, to cover the rising costs of the massive expansion of administration or for the standing armies with their mercenaries).

The two transformations not only found enthusiastic supporters, they also gave rise to existential uncertainty, critique, and debates. The most important reaction to the capitalization of politics in a world that all of a sudden seemed to be driving progressively into an open and unknown future was the revival of a political ideal that in research is called classical republicanism or civic humanism (Pocock 1975). This ideal had roots in ancient political philosophy, was brought back to life in humanism in Florence around 1500, and formed the political background of the reformation in Zurich after 1520. Later, it shaped the founding of the Commonwealth of England (1649–1660) as well as the Puritans, who emigrated to the British colonies in North America, and it was particularly revived in the founding years of the United States. It is a firmly antimonarchist – that is, republican – and anticapitalist political ideal, in which the citizens virtuously stand up for the common good. Their only passion is patriotism, love of the fatherland and its laws, which the citizens themselves have issued in self-government.

The Educationalization of the World in the Long Eighteenth Century II: The Solution

However, the advancement of the commercial society could not be halted by fully developing the ideal of the republican citizen. The natural sciences produced know-how for farming methods in agriculture, and surplus products were exported. Technical advances simplified the production of goods, trade flourished, and the capitalist bourgeoisie pushed for more political influence, especially in France, which ultimately led to the outbreak of the French Revolution in 1789, legitimized by theories of progress. On the other hand, and somewhat paradoxically, over the

course of the eighteenth century the political ideal of the anticapitalist citizen committed to the common good became increasingly attractive. The two opposing ideals were the central issue in a large part of the famous debates between the Federalists and the Anti-Federalists concerning the Constitution of the United States.

In other words, in the second half of the eighteenth century, the contradiction between progress in science and the economy on the one hand, and the popularity of the ideal of the anticapitalist citizen on the other, led to attempts to reconcile the two positions. It was not by chance that this reconciliation was pursued effectively in the Protestant strongholds of Switzerland. Protestantism – notwithstanding its different denominations – had turned from the Catholic emphasis on the institution (the Holy Mother Church) to the individual's soul as the instance of salvation, with no fundamental need of consecrated mediators (priests) between God and the individual. This Protestant focus on the individual's soul became the starting point of the educationalization of the world, insofar as the soul became the central object of education. The difference between German Protestantism (Lutheranism) and Swiss Reformed Protestantism (Zwinglianism and Calvinism) led to two different educational ideologies. Whereas Luther's unworldly political and social ideology led to the political indifferent and antimaterialistic contemplative educational ideology of *Bildung* (Horlacher 2016); the Swiss Reformed Protestantism developed an educational program aimed at active citizenship as a reaction to these fundamental transformations.

The key to accepting the changing living conditions towards a commercial life on the one hand and at the same time to adhering to the republican ideal of the selfless patriotic citizen on the other hand was to focus on the danger zone, so to speak, that is the human soul. Against the background of a commercializing society and the maintained ideal of the virtuous republican citizen, the keyword was "correct modification" of the soul – making the soul virtuous – which was interpreted as strengthening the soul,

developing inner strength. This idea subsequently became the starting point of the educationalization of the world, for it meant that a person with sufficient inner strength or virtue could safely resist all temptations of the (commercial) world and be a virtuous and active citizen. Here, inner strength represented the Protestant internalization of the steadfast Roman warrior hero, fighting not so much the enemy in the battlefield but rather the inner enemy of selfish passion. It was to be expressed as republican virtue in the time of commercialization; in this way it interlaced the common good and commercial society and thereby shaped the future for the welfare of all.

This modification – that is, strengthening the soul towards (civic) virtue – was the program that was to be realized through education. In this cultural transformation process the "self" became the crucial object of the growing subject; it was constantly assessed and monitored through self-reflection, which was often recorded in diaries. Educating the young towards self-examination thus appeared as the key to resolving the conflict between republican politics and the modern economy, as guarantor of an ordered modernity that does not fall prey to the passions related to power but instead is meant to ensure the common good *and* progress. Those who – through education – could strengthen the souls of children did not have to fear the open-ended and uncertain future of a commercializing society. It is this idea that is at the origin of the educational turn, the great transformation process that educationalized the world in a lasting way. Many persons had a part in shaping and popularizing this transformation, but none were as influential as Zurich-born Johann Heinrich Pestalozzi (1746–1827), who through his lifetime became the great promoter of an educationalized world, the star of an educationalizing culture that started to assign more and more perceived social problems to education (Tröhler 2013). This was the basis of the erection of mass schooling as the likely most successful new social subsystem in the Western world through the nineteenth and the twentieth centuries.

Educationalization of Social Problems as Phenomenon of the Educationalization of the World

The overall political, social, and cultural transformations brought about by the American Independence and the French Revolution created manifold uncertainties, in which the educationalization of the world became contextually nourished and demanded educational instruments or methods. Competing methods were propagated: Johann Ignaz von Felbiger's "normal method," Andrew Bell and Joseph Lancaster's monitorial systems, and Pestalozzi's educational method, which promised both harmonious-natural development of all the human faculties and morality and virtues. However, even if the monitorial or the normal method proved, for limited purposes, to be more successful than Pestalozzi's method, it was the latter that became the icon of the educational turn at the turn of the nineteenth century, possibly precisely because his method proved to be not really applicable at schools. The reduction of Pestalozzi's education aspiration – forming the virtuous citizen – to modern schooling was never his intention; his aim was more the educational salvation of Europe against the background of its moral and political decay: Good (virtuous) politics depended on a good education, and good education depended on "face to face and heart to heart" encounters.

Even when after a quarter of a century of political and social upheavals and economic transformations between the outbreak of the French Revolution and the Congress of Vienna, the European countries decided upon a program that was called restoration; Europe was on a track of progression, desperately in need of reassuring social order. Ideas of natural laws and the inalienable rights of every man as well as the local/regional identities of most of Europe's inhabitants had to be made compatible with the newly defined territorial entities called the nation-States. Whereas these nation-States were becoming defined and justified politically by the constitutions and defended militarily by the armies, the inner coherence of the nation-State, the inhabitants' identification with the nation-State, had to be made by education, respectively the school systems. The educationalizing culture in the beginning of the nineteenth century expressed the hopes and fears of an unknown future that had to be ensured through loyal citizens, resulting from educational processes to be implemented in organizational contexts, the schools. As a rule, all the nation-States defining themselves constitutionally as territorial entities passed encompassing education acts within 2–3 years after passing their constitutions (Tröhler 2016 in press).

It is one of the characteristics of an educationalized culture to react to unfulfilled expectations not only with educationalization of perceived social problems but also with more and allegedly better educational opportunities in general. Compulsory education was continuously extended and teachers trained more and more. The moral part of this teacher training had to be covered through the genre *history of education* and the more practical part through psychology of education. The ennoblement of teacher training to an academic subject/field was largely owed to the ongoing establishment of psychology as academic discipline, whereby it is no coincidence that psychology focuses on the individual's soul and that the earliest psychologists were – with hardly any exception – sons of Protestant ministers and/or had studied Protestant theology themselves (Tröhler 2011). But even when psychology had become an autonomous discipline working with empirical methods, the educational rhetoric remained idealistic, serving moral values deemed relevant for individuals to cope with the manifold challenges of progress, resulting from the enhanced knowledge production and knowledge dissemination in the educational systems.

Against this background, the educationalization of the world was not limited to solving perceived social problems such as health, crime, economy, ecology, traffic, military, teenage pregnancy, public behavior, or drugs and alcohol but was more fundamentally connected to the process of modernization itself, brought about by the modern sciences and ideas of freedom. Both the sciences and freedom seemed to be inevitable and desirable but at the same time under constant suspicion of creating an endangered individual, and it is here that education becomes a fundamental part of the modernist narrative itself and not

only of the process of the history of Western education, which would limit its focus to the educationalization of social problems. The educationalization of the world, transnationally propagated by organizations such as the OECD and globally disseminated by organizations like the World Bank or UNESCO, is the key to understanding the cultural (and ultimately Protestant) construction of modernity and the modern self as a self-reflective lifelong learner in the system of thought that embodies fears and the hopes for redemption at the very same time.

Cross-References

▶ Environment and Education
▶ Nation, Nationalism, Curriculum, and the Making of Citizens
▶ Quest for Heroes
▶ Religion and Modern Educational Aspirations

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Edupunk

▶ Defining Openness in Education

Edusemiotics

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▶ Semiosis as Relational Becoming

Edusemiotics To Date, An Introduction of

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Synonyms

Experience; Habits; Language; Meaning; Pedagogy; Peirce; Policy; Relation; Semiotics; Sign

Introduction

Semiotics is the study of signs, especially as regards their action, usage, communication, and signification (or meaning). The word semiotics derives from the ancient Greek words for sign and signal. In ancient times semiotics was a specific branch of medicine, with signs describing symptoms. Later semiotics became a branch of philosophy, with signs describing the nature of things. Semiotics exceeds the science of linguistics, the latter limited to verbal signs of words and sentences, and encompasses both natural and invented signs, such as culturally specific artifacts. Human beings are sign users, and semiotics can also serve as a metalanguage, the function of which is to describe human action. Semiotics both constructs models, or sign systems, and considers them to be its own object of research. Edusemiotics – educational semiotics – is a recently developed direction in educational theory that takes semiotics as its foundational philosophy and explores the philosophical specifics of semiotics in educational contexts. As a novel theoretical field of inquiry, it is complemented by research known under the banner "semiotics in education" and which is largely an applied enterprise. In this respect edusemiotics is a new conceptual framework used in both theoretical and empirical studies. Edusemiotics has also been given the status of being a new subbranch of theoretical semiotics, alongside biosemiotics or ecosemiotics, and it was launched as such at the 12th World Congress of the International Association for Semiotic Studies (IASS) held in September 2014 at the New Bulgarian University (Sofia, Bulgaria) that included participants from Europe, Australia, and North and South America.

History, in Brief

While Ferdinand de Saussure's structuralist perspective addressed largely linguistic signs, Charles Sanders Peirce's philosophy did not limit signs to verbal utterances. Signs also perfuse the nonhuman world in a variety of guises. Peirce's perspective was pansemiotic and naturalistic and emphasized the process of signs' growth and change called *semiosis*, representing the action, transformation, and evolution of signs across nature, culture, and the human mind. In contrast to isolated substances, such as body and mind in the philosophy of Descartes, a Peircean genuine sign as a minimal unit of description is a tri-relative entity, referring to something that it is not (its object or referent) via a third category (interpretant). Human experience is always marked by signs, and all thinking and living proceeds in signs.

Preceding the birth of edusemiotics, in 2008 a group of mostly European researchers in education formed an informal online community under the name Network for Semiotics and Education (out of Oulu University, Finland). The Philosophy of Education Society of Great Britain funded two international research seminars conducted by this group: in the University of Cergy in Paris in 2011 and in the University of Bath in 2012. Papers arising from these seminars appeared in two special issues of the *Journal of Philosophy of Education* (JoPE). Some members of the group were also invited to run a symposium at the Finnish Educational Research Association conference in Helsinki, followed by another one at the meeting of the International Association for Semiotic Studies in Imatra, Finland, in June 2013.

As a novel term, "edusemiotics" was coined by Marcel Danesi (the editor in chief of the journal *Semiotica*) as a subtitle to his Foreword to the comprehensive volume *Semiotics Education Experience* (Semetsky 2010). Recent research summarized in *Edusemiotics: Semiotic Philosophy as Educational Foundation* (Stables and Semetsky 2015) and *Pedagogy and Edusemiotics: Theoretical Challenges/Practical Opportunities* (Semetsky and Stables 2014) continues and develops this critical and creative impulse. While the first book is coauthored, the second represents an edited collection of chapters by international researchers including such members of the Philosophy of Education Society of Australasia as Jayne White and Marek Tesar. The seeds of edusemiotics however had been planted much earlier (some of these seminal works are listed in References).

Edusemiotics as an Anti-Dualist Philosophy

Stressing the importance of "sculpting a veritable *edusemiotics for the future*" (Danesi 2010, p. vii), Danesi commented that "until recently, the idea of amalgamating signs with learning theory and education to establish a new branch, which can be called *edusemiotics*, has never really crystallized, even though the great Russian cultural psychologist Lev S. Vygotsky had remarked … that… 'human beings actively remember with the help of signs'… In these words can be detected the *raison d'être* for establishing a connection between *semiotics* as the science of signs, *learning theory* or the science of how signs are learned, and *education*, that is, the practical art/science of teaching individuals how to interpret and understand signs." Danesi noticed that research in education "has traditionally turned to psychology to help it transform teaching into a more 'learning compatible' and 'performance-oriented' activity" (2010, p. x). The shift to philosophy enabled by edusemiotics started to bring into sharp focus the dimensions of epistemology, ontology, and ethics often missing in educational research, together with existential questions of meaning – positing those as especially valuable for education and in urgent need of exploration.

Educational theory today, even if implicitly, is often haunted by the ghosts of the past: Cartesian substance dualism, analytic philosophy of language, and the scientific method of modernity as the sole ground for educational research. Human subjectivity with its gamut of experiences and purposes is thus excluded. Edusemiotics as an alternative philosophy is marked by several distinctive characteristics, the first being the priority of process over product as especially important for the discipline of education traditionally focused on finite measurable outcomes. Another important feature of edusemiotics as a distinctive conceptual framework is its ability to overcome the principle of noncontradiction and the logic of the excluded middle. The holistic perspective taken by edusemiotics entails relational ethics; expanded experience; emphasis on interpretations surpassing factual evidence; a conception of language understood broadly in terms of semiotic structures exceeding the linguistic but encompassing images, diagrams, and other regimes of signs; embodied cognition; and the importance of self-formation as a lifelong process, thus having implications for education throughout the lifespan, inclusive of children and adults. Especially significant is edusemiotics for exploring questions of educational policy and practice and alternative research methodologies, including but not limited to phenomenology and hermeneutics with a view to positing multiple recommendations derived from its foundational principles.

In defiance of the fragmentation of knowledge still prevalent in education, edusemiotics construes a unifying paradigm that opens up a range of opportunities for human development and transformative education. Edusemiotics is an *integrative* conceptual framework. Integrative practices are largely absent from the Western educational system and relegated to Eastern traditions and philosophies such as Tao or Buddhism. In the West, philosophy and education continue to suffer from the great bifurcation between sign and object, between man and world, or – at the sociocultural level – between self and other. Overcoming such habitual dualisms both in theory and in practice is the ultimate purpose of edusemiotics. Edusemiotics continues and reinterprets the intellectual legacy of major philosophers and critical theorists, crossing over from American Pragmatism to Continental philosophy and also revisiting ancient philosophies, for example, Hermeticism. Philosophers in the pragmatic, versus analytic, tradition reject a sharp dichotomy between subject and object, body and mind, as well as epistemology reduced to the spectator theory of knowledge. Keeping this rejection from being just a slogan is indeed a task pursued by edusemiotics. This task is complex and requires the synthesis of cognition and affect, logic and ethics, and ontology and practice.

A minimal unit of description in edusemiotics, like in semiotics in general, is not an individual thing or person, but a sign as a relational – versus substantial – entity, which continuously engages in changes and transformations, thus defying the

perceived binary oppositions between not only Cartesian categories of mind versus matter but between all other dualisms. As a philosophy of education, edusemiotics aims toward ultimately organizing a sense of the relational self, in which a generic other would be integrated. C. S. Peirce's semiotics presents the whole universe as perfused with signs. In such a universe, the human mind is not separate from the environing physical world but is engaged in a continual participation with it, thus forming a holistic process-structure, a network, encompassing sociocultural and natural aspects. People are signs among signs and are sign users. Everything is a sign – still, nothing is a sign unless it is interpreted. This statement sounds paradoxical, yet the presence of paradoxes is one of the characteristics of semiotics and edusemiotics. The modes of inference include, in addition to deduction and induction, also abduction functioning on the basis of the logic of discovery rather than just the logic of justification. Signs, via the dynamics of multiple interpretations and translations into other signs, evolve and grow. Learning is achieved not by an analytic, Cartesian mind that observes the world from which it is detached, but by synthetic – or integral – consciousness that constructs an expanded field of meanings informed by lived experience. Edusemiotics interrogates anthropocentrism, positing an embodied mind connected to the greater, posthuman environment. Education, in semiotic terms, is a relational process of growth as a function of engaging with, and learning from, signs situated in life, in experience, in ethical practice.

Some Practical Implications of Edusemiotics

Experiential learning expands the walls of the traditional classroom and opens it to the greater social and natural world. Edusemiotics partakes of an open-ended practical inquiry that does not aim to attain finite and indubitable knowledge. It problematizes the prevalent role of formal instruction and elicits alternative pedagogies. Pedagogy in

the spirit of edusemiotics is not reducible to teaching "true" facts, but aims to enrich experience with meanings and values. Thus, learning by means of using signs becomes a modality of both formal and post-formal pedagogies that strengthen relations and connections and are oriented to meaning-making practices; the value dimension of edusemiotics is thus implied. This perspective defies the reductionist paradigm and the model of educational research as exclusively evidence based. Edusemiotics posits empirical evidence as always open to interpretations. It creates a novel open-ended foundation for knowledge which is always already of the nature of a process, thus subject to evolution, development, and the intrusion of signs that need to be interpreted anew in the unpredictable circumstances of lived experience for which our old habits of thought and action may be unfit or counterproductive. The process of semiosis that encompasses human beings functioning as signs elicits the transformation of habits as especially important in the context of education.

Logic as semiotics is the science of the necessary laws of thought. It defies the classical principle of noncontradiction that dates back to Aristotle and relates to the law of the excluded middle that "informs" the analytic logic of the propositional (verbal) language: a proposition is either true or its negation is true – that is, there is nothing in between the two parts of the contradiction. All binary opposites become subject to mediation enabled by the paradoxical structure of genuine signs that have an included middle (in this or that guise) which ensures signs' dynamic growth in meanings rather than the attainment of stable truth. In contrast to the law of noncontradiction that continues to haunt education on the basis of which teachers demand unambiguous and singularly "right" answers, edusemiotics asserts that it is precisely logical contradictions (or moral dilemmas that may be embedded in lived experience) that may serve as important learning material. It is the indirect mediation as a semiotic interpretation that establishes a triadic versus dyadic relation. As relational entities, signs defy the logic of *either-or*; and it is the

mediation peculiar to genuine signs that constitutes their most distinctive aspect and amounts to the logic of the included middle, of *both-and*, that characterizes edusemiotics and makes education transformative and creative.

It is because of this logic that the creation of new signs takes place: signs grow, that is, they become other signs within the interpretive, that is indirect, mediated, and recursive, process of semiosis. Such process is the very foundation for the transformation of habits in actual practice. The transformation of habits – both in thought and in action – is embedded in the relational dynamics of "becoming" in contrast to static "being." Accordingly, edusemiotics as a theoretical framework leads to reformulating the received notion of progress equated with material success and quantitative measures. Edusemiotics changes the perception of standards that serve as the established policy for testing, assessment, and evaluating academic success versus failure. Failure, in accord with the process of signs being transformed into other signs, may turn into its own opposite, that is, carry a positive value by virtue of being a learning experience. The edusemiotic perspective leads to positing new ethics oriented to creating reconciling relations between ourselves and others that can bring about mutual understanding and sharing each other's values. Signs function as unorthodox "texts" comprising human experiences that can be "read" and interpreted. By responding to, and interpreting, such texts' indirect and often subtle messages that, rather than being "clear and distinct" Cartesian ideas, often reach us at the unconscious levels only, we ourselves become *more developed signs*.

Human Development

Edusemiotics has a bearing on teacher training and educational policy-making. Because semiosis is a never-ending process of signs becoming other signs, education cannot end when a child grows up: personal development proceeding through the life span cannot be limited to professional training. Edusemiotics demands a continual engagement with signs inclusive of personal moral and intellectual growth as the transformation of habits. Edusemiotics reconceptualizes adult education in terms of lifelong learning from events and experiences, positing the human subject as a sign among other signs always already engaged in relations comprising the process of becoming. Edusemiotics defines subjectivity as a process. Such process necessarily involves self-reflection. The realization of meanings in lived experience enriches this very experience with its existential dimension and replaces moral norms and binary codes with relational ethics. A semiotic approach to the structures of knowledge leads to reciprocity between ethics and reason, knowledge and action. Teachers' self-knowledge becomes a must, because without knowing oneself one cannot know others – hence one would be unable to establish a genuine self-other relation as foundational for the *ethics of integration* – a distinguishing feature of edusemiotics.

The edusemiotic process of the evolution and transformation of signs intrinsically determines new opportunities for human development and transformative education and necessarily encompasses the future-oriented dimensions of becoming, novelty, and creativity. These elements were the defining characteristics of Alfred North Whitehead's process philosophy and need to be taken into account in education. As creative, edusemiotics problematizes the model of teaching reduced to the unidirectional transmission of pre-given content from a generic teacher to a generic student. Rather, teachers and students together are part of the same semiotic process: they form a single relational unit. In other words, teacher and student cannot function as individual and independent entities. When a teacher's aim is to instruct and a student's to receive an indubitable instruction, they, unbeknown to each other, put into practice the habitual philosophy of Cartesian dualism. Edusemiotics however posits a teacher and a student as one unified, albeit double-sided, whole – a sign, a relation. They are interrelated and interdependent by virtue of being embedded in the mutual field of signs creating shared meanings.

Conclusion

Edusemiotics demands that the anti-Cartesian logic of signs becomes our new habit in life. However the educational field tends to subscribe to an old dualistic worldview across theory, practice, research, and especially policy! The old habits of thought and action appear to be resilient; indeed we wouldn't call them "habits" otherwise. Even if habits can eventually evolve and grow by virtue of themselves being signs of experience, they tend to become fixed and rigid, thus closing themselves to change and transformation in the manner of genuine signs. To put into practice the program of education in edusemiotics remains a current challenge. Still, research seminars and lectures are being given by "edusemioticians" at conferences around the world, and graduate seminars on the topic have been offered in some universities, notably in the University of Chile. In November 2014, a symposium on edusemiotics took place at the Philosophy of Education Society of Australasia Annual Meeting in Hamilton, New Zealand. A special issue of the journal *Semiotica* titled "On Edusemiotics" is currently in production. And a comprehensive volume *Edusemiotics – A Handbook* is forthcoming with Springer Publishers.

The overall aim of edusemiotics is the creation of "the open society" (Peters 2009, p. 303; Simons et al. 2009) as the transformation of the whole of the knowledge economy. Continuing research in edusemiotics is needed to eradicate old habits and investigate the effects of such a perspective on diverse sociocultural relations. Edusemiotics is educative as it leads us out of old habits. Indeed, the Latin *educare* means to lead out as well as to bring out something that is within, however not confined within the narrow boundaries of Cartesian cogito. Edusemiotics displays radical, expansive reason constituted by signs. This reason should begin to inform educational policies and educational reform.

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Edusemiotics, Subjectivity, and New Materialism

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Synonyms

Deleuze; Dewey; Edusemiotics; Embodiment; Feminism; New materialism; Peirce; Post-humanism; Quantum physics; Relation; Science

Introduction

Edusemiotics is a novel direction in educational theory. New materialism is a novel direction in cultural theory. Both areas of research, while "located" in humanities, pay close attention to contemporary developments in natural sciences such as physics and biology. Both are strongly

anti-dualist. However, while new materialism seems to revert to the philosophy of *monism*, edusemiotics emphasizes the irreducibly *triadic* structure of signs that ensures their dynamics and enables their action and evolution. New materialism tends to draw from the continental tradition in philosophy (notably Deleuze), while sources feeding into the latest developments in edusemiotics are plenty, including American pragmatism. Still, both directions have much in common and seem to exit in parallel – their appearance in their respective fields (cultural studies and education) is nearly simultaneous. Being anti-dualistic, they also deny the division between ontology and epistemology. As for the dimension of ethics, both demonstrate a relational, and partaking of feminist, bent. Both problematize all binary divisions and rigid classifications in favor of relations, maps, diagrams, and cartographies. This short entry does not aim to "compare or contrast" edusemiotics with new materialism but rather intends to present some selected conceptualizations in both areas of research, mapping them into each other's trajectory and thus opening avenues for further cross-disciplinary research. The entry presents human subjectivity as always already posthuman, emergent, continuously learning, and equipped with semiotic competence.

Semiotics and New Materialism

Semiotics – and, by implication, edusemiotics – is not just *about* signs: it concerns itself primarily with the *action* of signs (a point often missed). It was St. Augustine who first stated that the action of signs proceeds in nature and in culture. In modern times, C. S. Peirce proclaimed that the whole universe is perfused with signs which possess the quality of irreducible triadicity. The action of signs is not direct or dyadic but indirect or mediated. The sign stands for something other than itself, by virtue of the existence of some "third" element *between* the two: that is, indirectly. Genuine semiotic action is always relative to this included third; therefore, the interaction between any two subjects is not purely subjective: according to contemporary semiotician John

Deely, it is suprasubjective. Such action cannot be described by the action of any individual agent: a sign is a relation between self and other that presupposes their mutual participation in the same semiotic process and demands what Deleuze and Guattari (1987) called mutual solidarity. As such, a proper semiotic relation is based on intra-action (not inter-action) – a term that Karen Barad (2007) coined for the purpose of defining the metaphysics of new materialism which intends to emphasize the dimension of "between" and constructs, accordingly, onto-epistemology that serves as an unorthodox foundation for ethics. A feminine approach to ethics in education, such as the ethics of care and its follow-up, the ethics of integration (Semetsky 2010), presents relations as being ontologically basic.

The key neo-materialist scholars of today who target dual oppositions are Rosi Braidotti, Manuel DeLanda, Karen Barad, and Quentin Meillassoux (e.g., Dolphijn and van der Tuin 2012). Braidotti continues a feminist tradition in cultural theory that, just like edusemiotics, interrogates logocentrism and anthropocentrism in favor of posthumanism and culture-nature assemblages (signs), thereby positing human subjectivity as unavoidably embodied. Meillassoux's materialism, while "speculative," is however not foreign to scientific rationalism: he calls for establishing the absolute scope of mathematics as a formal (rather than vernacular) language to describe reality, albeit under the *proviso* of including the dimension of meaning in science.

Inquiring into the nature of the language of signs (verbal, mathematical, or otherwise) is one of the tasks pursued by edusemiotics (Semetsky 2013) that brings to mind Leibniz's and Deleuze's explorations of *mathesis* as the unified science. While Descartes remained skeptical of the project of the *universal language* as it became known, Leibniz had envisaged a formal *scientia generalis* of all possible relations between all concepts in all branches of knowledge taken together. This unified science of all sciences, called *mathesis universalis*, would employ a formal universal language of symbols, with symbols themselves immanent in life, in nature. Deleuze (2007) points out that the "the key notion of mathesis... is that

individuality never separates itself from the universal... Mathesis is... knowledge of life" (pp. 146–147) and has liberating and creative power. Such knowledge of life is equivalent to the knowledge of signs "spoken" by life: it partakes of the *intensive* science posited by DeLanda (2002).

DeLanda focuses on the nonlinear dynamics of the (neo-)material world as consisting of matter-energy flows rather than stable physical structures. In turn, edusemiotics does not restrict the semiotic reality to matter and energy but affirms the "third" dimension of information: together they form the triadic signs that perfuse the world, thereby denying that matter is inert or dead (Semetsky 2013). Body is minded and mind is embodied. The premise of ancient Hermetic philosophy (which is one of the precursors of edusemiotics) that matter is alive and grounded in relations is confirmed by new science. Edusemiotics and new materialism alike are "breakthrough" areas of research, and it is the life of signs (human and nonhuman) that literally "breaks through" general categories and rigid classifications. It is the entanglement (the term used by Barad, who borrows it from quantum physics) of matter and meaning that eliminates the remnants of positivism and renders invalid the subject-object dualism. However much earlier, it was John Dewey – one of the theoretical forerunners of edusemiotics – who posited the relation between the observer and the observed via the very *act* of observation, therefore strongly rejecting the method of "objective" science.

The Science of Signs

The developments in semiotics as the science of signs represent the process of recovery from classical physics as the unfortunate heritage of positivism and the paradigm for all other discourses, including research in social sciences. The dynamical structure of a quantum entity is triadic. The apparently opposite terms of A and not-A as its perceived "other" are in a triadic relation in accordance with the semiotic logic of the included middle designated as T (Fig. 1).
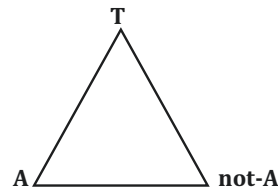
Edusemiotics, Subjectivity, and New Materialism, Fig. 1 A genuine triadic relation describing a quantum entity

The cutting-edge science of coordination dynamics (Kelso and Engstrøm 2006) does not separate the world of nature from the human mind but posits a single entity designated as body ~ mind. The symbol tilde (or squiggle ~) creates a new vocabulary to describe the philosophy of complementary pairs (signs) that spills over analytic reason and the mere expression of linguistic truths. This symbol designates the "between" relation as intrinsic to edusemiotics, new materialism, and quantum physics alike. The notation (~) between body and mind indicates a unifying connecting relation as the prerogative of genuine signs. The logic intrinsic to the action of signs demonstrates the radical rationality of semiosis that overcomes widespread dichotomies.

The principle of complementarity (versus opposition) was first posited by physicist Niels Bohr who questioned the "either-or" description of nature (either particles or waves). For Bohr, whose position incidentally inspired Barad's research, the interplay of *yin* and *yang* tendencies forming one integrated whole in the Chinese philosophy of Taoism was relevant to, and informative for, his new theory. Physicist David Bohm, positing the process of holomovement, emphasized the absence of any direct (mechanistic) causality in lieu of the relations between events interwoven into the whole by the network of quanta. What we tend to perceive as binary opposites at the level of ordinary experience are in fact not contradictory but complementary at the most subtle, quantum, level. They are engaged in coordinated, relational dynamics that makes them a pair, a couple, a double-sided single entity: a sign. It is coupling that demonstrates the continuous balancing act – what Leibniz would call a

dance of particles folding back on themselves – as a property of the relational network of signs that coordinate, or reconcile, nature and culture.

Semiosis is the relational network of signs which are perpetually in action, and quanta (Fig. 1) partake of signs full of implicit information that continuously changes its mode of expression, fluctuating between polar opposites. The logic of the included middle ensures the coordination dynamics that "champions the concept of functional information, and shows that it arises as a consequence of a coupled, self-organized dynamical system living in the metastable regime where only tendencies... coexist" (Kelso and Engstrøm 2006, p. 104). Meaning emerges when such coordination is temporarily stabilized. Signs – as well as quantum entities – are a priori virtual tendencies only, and Deleuze was right when he postulated his ontology of the virtual. Yet signs become actual – that is, acquire meaning – when interpreted in practice. It was Peirce who saw that the full development of semiotics as the science of signs required a dynamic view of signification: the process of the production of meanings as included thirds called interpretants. At the practical level, when we step into the lifeworld of experiences participating as such in the action of signs, then, due to the string of interpretants that include our own actions, we begin to understand the meanings of this and subsequent experiences: we learn by actively creating such meaning!

Edusemiotics, Nomadic Education, and Semiotic Competence

The concept of "nomad," as posited by Deleuze and Guattari, is fruitful for edusemiotics. A nomadic place is always intense because nomads' existence is inseparable from the region or space they occupy: together they create a rhizomatic network of interdependent relations. The smooth space occupied by nomads is an open-ended relational process ~ structure (with tilde) in contrast to a closed striated space ordered by rigid schemata, point-to-point linear connections, and displaying strict boundaries and borders. The classical episteme of metric systems, technical objectives, and precise measurements and classifications gives way to an experimental and experiential "field... wedded to... non-metric, acentered, rhizomatic multiplicities" (Deleuze and Guattari 1987, p. 381); these qualitative multiplicities (versus quantitative or metric units) are semiotic relations or signs. The action of signs as the primary subject matter of semiotic inquiry extends beyond verbal language, even though it is only through linguistic competence that this range can be brought to light for us as inquirers and learners.

Experiential learning is equated with the development of semiotic consciousness, which is the explicit awareness of the function of signs acting across nature and culture. A semiotic consciousness presupposes fully fledged semiotic competence, of which linguistic competence is only a subset. It is semiotic competence that edusemiotics is designed to elucidate in the field of educational theory and practice. This perspective is important to edusemiotics with its attention also to such expressive "languages" as images, diagrams, graphic symbols, hieroglyphs, as well as signs portending in the world. Such a broad understanding of semiotic systems makes it clear that the notion of "text" exceeds its literal meaning. Texts can be of any physical structure that embodies ideas as signs. The whole of culture, in such a radical sense, is a text and so is the "book of nature." Both texts can be read, interpreted, understood, and acted upon.

While the notion of "agency" is essential, it is never an individual agent that "acts" within semiosis. As signs are relational entities, so are human agents who are themselves signs and should always be taken in the context of their relations with others, in nature and culture alike. Edusemiotics considers human subjectivity as always already posthuman and situated in nomadic spaces. Barad, in the context of new materialism, advocates the concept of agential realism based on the ontological inseparability of "agencies." It is the relation that is ontologically fundamental, and such relations (as genuine signs) constitute an unorthodox agency as a community of inquiry. Peirce attributed particular significance

to community in its knowledge-producing practice: "The real, then, is that which, sooner or later, information and reasoning would finally result in, and which is therefore independent of the vagaries of me and you. Thus the very origin of the conception of reality shows that this conception essentially involves the notion of a **community,** without definite limits, and capable of a definite increase of knowledge" (Peirce CP 5.311). Such a community of practical inquiry is theoretically unbounded by space or time and is future-oriented, notwithstanding that as discrete physical individuals we of course remain finite human beings:

> Finally, as what anything really is, is what it may finally come to be known to be in the ideal state of complete information, so that reality depends on the ultimate decision of the community; so thought is what it is, only by virtue of its addressing a future thought which is in its value as thought identical with it, though more developed. In this way, the existence of thought now depends on what is to be hereafter; so that it has only a potential existence, dependent on the future thought of the community. (Peirce CP 5.316)

Edusemiotics alerts, however, that what is finally known is bound to lurk in the *future* precisely because a semiotic system remains open to new information, new experiences, new meanings, and new modes of action. A sign's closure on its meaning is simultaneously an opening to another, more developed, one. The state of complete information, pointed to by Peirce, remains a limit case that, paradoxically, would forever "close" a system by putting a stop to its very dynamics. Achieving a semiotic competence is a never-ending learning process.

Posthuman Subjectivity

Nomadic education proceeds along the lines of signs-becoming-other (read: self-becoming-other) – and human subjectivity, which is itself a sign, emerges amidst the experiential "*encounter* of the sensible object and the object of thought" (Deleuze 2007, p. 151). Still, the emphasis on individual agency remains a deeply ingrained habit of contemporary philosophical thought

and, by implication, education: either implicitly or explicitly, both tend to carry on the Cartesian tradition with its strict boundary between the dual categories of mind and body, subject and object, self and other, human and nonhuman. The value of relations and the nature of the self ~ other complementary pair as a minimal theoretical unit posited by edusemiotics remain either ignored or underestimated. It is a relation that *extends* human mind into a larger world that includes both sociocultural and natural aspects. Human subjectivity as community is thus necessarily posthuman and presupposes an ecological awareness. It was John Dewey who persistently argued against separating human experience and the whole of culture from nature. He spoke about the cooperative (or civic) intelligence necessary for associated living which, for him, was what democracy was all about.

For Dewey, experience is never exclusively personal: it is "nature's, localized in a body as that body happened to exist by nature" (Dewey 1925/1958, p. 231). A semiotic process is cooperative because of the transactional dynamics that involves responses on both sides of the relation and as such "constitutes the intelligibility of acts and things. Possession of the capacity to engage in such activity is intelligence" (Dewey 1925/1958, pp. 179–180). Semiotic competence demands developing posthuman intelligence as a significant part of education that considers "Natural events... messages to be enjoyed and administered" (Dewey 1925/1958, p. 174). When the human mind extends to accommodate the nonhuman nature, we begin to understand the meaning of such an expansive experience. Dewey's philosophy is an invaluable resource for edusemiotics.

Edusemiotics demands a shift of perception from static objects and stable structures to dynamic processes crossing over the mind-body dualism and leading to the dynamical "formation of patterns in open systems" (Kelso and Engstrøm 2006, p. 112). It is fully semiotic, anti-dual, reason that is always open to the creation of meanings, and as such it should become instrumental for forming, informing, and transforming education. New, emergent, meanings are the natural consequences of triadic logic on the basis of which

new signs, including ourselves, are created. We are not Cartesian Cogitos but signs possessing eco-centric (not ego-centric) consciousness. Edusemiotic intelligence exceeds even interpersonal reasoning (which remains invaluable for our relations with and understanding "others") and includes a *transpersonal* aspect, thus bringing into existence the deepest meanings latent in the posthuman dimension of experience, in nature. Edusemiotics would be incomplete without a developed posthuman intelligence, which in turn is a function of growth, learning and developing semiotic competence as part and parcel of edusemiotics.

The ultimate task of edusemiotics is to produce subjectivities that are open to the larger environment (comprising other people, cultures, nations, languages, natural habitats), thus forming with it one organic whole. Taking responsibility for developing a new type of holistic intelligence capable of putting into practice relational ethics, hence sustaining both human and posthuman communities, is one of the many challenges faced by edusemioticians. Educational policy needs to be informed by the semiotic logic of the included middle. Accordingly, policy-makers – rather than merely articulating theoretical goals, missions, norms, rules, and measures – should become aware of the action of signs.

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Emotions

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Synonyms

Affect; Feeling; Passion; Sentiment

Introduction

Cognitive science has shown that emotions are a sine qua non for cognition, and nowadays emotions are not anymore understood as irrational or "nonintellectual" feelings. The debate regarding the nature of emotions is still ongoing; however, it would be possible to provide a general definition of emotions as complex states of mind and body, which have an active power – they are not

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Note: None of the terms mentioned as synonyms carries the meaning that "emotion" has come to bear in cognitive sciences and contemporary philosophy of emotion.

characterized only as receptivity – that impacts human's intentionality towards the environment.

The goal of this entry is to highlight the role of emotions in reasoning, focusing on their meaningfulness in learning environments and in those educational practices where emotions work together with rationality to enhance understanding and learning. Following the description of the three main ways to understand emotions in the contemporary philosophy of emotions, this entry will discuss the differences between the standard cognitivist approach and other approaches grounded in the embodied cognition in education.

Emotions as Judgments

Cognitivism in the philosophy of emotion assumes that emotions are identical to propositional judgments. In the *History of Western Philosophy*, Aristotle was the first to highlight the rational valence of the *pathemata*, and the Stoics provided the identification between emotions and evaluative judgment. Many contemporary philosophers ground their cognitivist approach to these ancient roots (cf. Nussbaum 2001) valorizing the intelligence of emotions in practical reasoning.

> The arousing of prejudice, pity, anger, and similar emotions has nothing to do with the essential facts, but is merely a personal appeal to the man who is judging the case. (Aristotle, *Rhetoric* 1354 a16–19)

Emotions as Perceptions

A quite novel approach is the perceptual model (cf. Prinz 2004), for which emotions are a form of perceptions, i.e., the more primitive and basic form of cognition. This approach has significant consequences for moral philosophy, since it claims that as perceptions are related to judgment about the empirical word, emotions are, therefore, related to moral judgments (Goldie 2007).

The perceptual model emphasizes the "feeling towards," i.e., the intentional character of emotions: just like perceptions, emotions overcome themselves in order to reach the object they are for. This model has a mind-to-world direction:

> The emotions are intentional. By this I mean that the thoughts and feelings involved in an emotion have a directedness towards an object. [. . .] the object of an

emotion is that onto which one's thoughts and feelings are typically directed, and to which they typically return, so the object of my pride in this example is not just myself, nor just my house, but my-house-which-belongs-to-me. (Goldie 2000, pp. 16–17)

In practical reasoning, emotions are not only a passive stance, but thanks to their intentional and motivational power they are an active force in the "organization" of patters of actions. As in the cognitivist approach, emotions "could be said to be judgments, in the sense that they are what we see the world 'in terms of.' But they need not consist in articulated propositions." (De Sousa 2014, p. 19). Following this direction many exponents of the perceptual model reply to the main critique toward cognitivism, i.e., the non-conceptual apprehension of the world of beast and babies (cf. Deigh 1994), by binding emotions with desires.

Emotions as Body Feelings and Other Similar Approaches

The criticism towards the standard version of cognitivism has led to new paradigms that share the recognition of the strong value of body experience and environment. Even if these approaches have some peculiar traits creating differences among them, one could still highlight the common rejection of the standard assumption that cognition is instantiated "centrally" by the brain only. Emotions are expressions of the whole living organism embedded in the world and affectivity pervades the mind.

According to William James emotions are body feelings: in the apprehension of reality first comes the body feeling and then the judgment of experience. Physiological changes precede emotions that are the subjective experience of body changes.

If we fancy some strong emotion, and then try to abstract from our consciousness of it all the feelings of its characteristic bodily symptoms, we find we have nothing left behind, no "mind-stuff" out of which the emotion can be constituted, and that a cold and neutral state of intellectual perception is all that remains. (James 1950, p. 173)

Aside from James's account, in this category we could count those approaches emanating from continental philosophy, mainly from phenomenology, existentialism and women's philosophy, and multidisciplinary approaches that combine different disciplines as philosophy, psychology, sociology, biology, and neuroscience. In particular, enactivism (Varela, et al. 1991), that describes an embodied and embedded cognition, and the extended mind hypothesis (Clark and Chalmers 1998), that focuses on the cognitive valence of external tools, have elaborated very promising theories about the role of emotions in general or particular emotions in cognitive processing (cf. Colombetti 2014; Slaby 2014; Candiotto 2015; Carter et al. 2016).

In these approaches, the comprehension of emotions is grounded in an account of the mind that emphasizes its embodied and affective character, making the emotion the more primitive way in which an organism understands, decides, and acts in a particular environment.

Emotions in Education

Generally, the theoretical background of most methodological approaches with regards to the use of emotions in reasoning comes from cognitivism and, partially, from constructivism. Problem solving and multiple intelligences (emotional intelligence, among the perceptual and conceptual ones) are emphasized by cognitive methodologies in education. One such approach suggests that emotional intelligence can fulfill the human experience of life and that its promotion could improve significantly the majority of relational skills. Daniel Goleman (1995) outlines five skills involved in emotional intelligence: (1) being aware of one's emotions, (2) managing emotions, (3) motivating oneself, (4) empathizing, and (5) relating well with others in a group. He explains that these skills can be learned just like any other subject. Many trainings have been developed (i.e., the Life Skills training) in order to make students aware and leaders of their emotional competency, both in their positive and

negative outcomes, providing them some tools for feeling.

> If we think of emotions as essential elements of human intelligence, rather than just as supports or props for intelligence, this gives us especially strong reasons to promote the conditions of emotional well-being in a political culture: for this view entails that without emotional development, a part of our reasoning capacity as political creatures will be missing. (Nussbaum 2001, p. 3)

The capability approach, developed by Martha Nussbaum and Amartya Sen, stresses the importance of emotions as inner resources of the human being to develop her/his potentialities and to determine the quality of life – not only for the individual but for the community as well.

For constructivism (Averill 1980) the social context represents the basis of the generation of emotional responses; social epistemology moves beyond the traditional focus on solitary knowers and stresses social and public mechanisms in the quest for truth. A variety of projects were developed in the direction of creation of emotional life in safe learning environments where dialogical communication and sharing cognition were improved (i.e., the Philosophy for Children curriculum created by Matthew Lipman and the contemporary Socratic Dialogue).

> [. . .] what often causes a breakdown of understanding is that the parties involved are able to appreciate only the linguistic or the cognitive factors involved in their interaction with one another but fail to achieve that exchange of emotions that would make their mutual understanding a reality. (Lipman 2003, p. 270)

The experienced and embodied knowledge stresses the external shared dialogical embodiment of the cognitively-motivational state of students. The key idea is that knowledge processes are not abstract but embedded in real practical situations (cf. Ardelt and Ferrari 2014). The social ratiocinating interactions are emphasized in all disciplines, also in the scientific ones. Some learning programs (Prensky 2013) based on the extended mind theory are still at work, often connected to

media education. Extended emotions represent a meaningful hypothesis among the externalist conceptions of mind to design educational programs where knowledge is not understood as the goal of solitary knowers but as the dynamic result of an active and external cognitive and learning process emerging from the interaction inside a group.

> The affective dynamics pertaining to a group profoundly transforms the individual group member's emotional experience. Could this process reach the point at which entirely *novel* emotional processes are constituted? This would be a case where goings-on on the group level would function as a phenomenal extension of an individual's emotions. (Slaby 2014, p. 32)

What is crucial to understand about the learning group settings is that the classroom emotional climate (CEC) is not just something good to pursue because it creates a better environment to improve the relationship among students and between students and teachers but, significantly, that it is exactly this learning environment that permits to attain cognitive and learning achievements. That is why emotions are not just shared but also "extended."

A wide overview – even if not exhaustive – of the many and different programs which have as background what was presented here as the third approach on emotions (emotions as body feelings) could be found in Lund and Cheni (2015).

Conclusion

Discussions about the influence of emotions in learning and in the ability to process information, i.e., if emotions just affect learning or if they are a necessary component of reasoning, are still à la page. Research on the so-called epistemic emotions, i.e., curiosity, love of truth, wonder, intellectual courage, and meticulousness, looks very promising and offers significant contributions to the debate. Moreover, these results are strictly connected to research about the usability of knowledge learned since this kind of emotions could be seen as "facilitating structure" (Immordino-Yang

and Damasio 2007) for the application of knowledge and therefore for practical reasoning.

Another import field of research focuses on transdisciplinary methodologies utilized to improve the emotional skills of the students. Regarding this point the emotion cross-cultural studies, combining art, literature, music, drama, film, etc. are very encouraging.

As the entry has underlined, there are many different theoretical and practical approaches to emotions in reasoning; however, it is possible to highlight a common and general account of the contemporary theories and projects, that is the recognition that emotions really matter, since they make something or someone more prominent, i.e., meaningful in relation to our acts. Then, regarding the learning theory and practice, emotions are very important to improve student's motivation towards learning, their attention to determining salience to the topics, their capabilities to storage information, and to use the knowledge learned in daily life. Emotions have not just an instrumental value for learning – for example, helping to make juicier the process of learning for the students, more connected to their experience, and able to improve the students' participation to the process – but also an intrinsic value, defined by the role of emotions in reasoning, i.e., to be the primitive source for the subject to understand and decide how to act in the world.

Cross-References

▶ Dialogue and Critical Pedagogy
▶ Educational Leadership, the Emotions, and Neuroscience
▶ Emotions and Educational Leadership
▶ Socratic Dialogue: A Comparison Between Ancient and Contemporary Method

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E

Emotions and Educational Leadership

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Synonyms

Educational leadership; Emotions; Feminist and critical approach; Psychological approach; Socio-cultural approach

Introduction

In the last two decades, there has been growing research challenging the binary between reason/emotion embedded in mainstream literature on educational leadership. For many years, emotions were characterized as irrational, and as such, they were not considered to have a legitimate place in the workplace (Ashforth and Humphrey 1995). But research on emotions in the workplace, including educational organizations, started to flourish in the early 1990s after it gradually became evident that emotions were influential in decision-making, motivation and behaviors in organizations, administration, and leadership. Although the importance of researching emotions for understanding educational leaders is realized, the literature on emotions and educational leadership is still limited (Berkovich and Eyal 2015). In addition, there is still considerable conceptual work to be done in relation to the theoretical approaches that are mobilized to explore emotion in educational leadership.

The aim of the present entry is to review findings and methods about the emotional aspects related to educational leadership during the last two decades. This is not a comprehensive review of specific literature but rather a broad sketch of the landscape to provide an overview of the field. The entry begins by showing how and why emotions are relevant to understanding educational leadership. Next, it discusses the different theoretical approaches of emotion that have been utilized in educational leadership research; it is also suggested that theoretical assumptions about emotion have relevant methodological implications in terms of how emotions are studied. Then, the entry summarizes some of the most important findings in the study of emotions in educational leadership, outlining the major themes emerging from research. The entry concludes with the implications of these findings for future research about emotions and educational leadership.

How and Why Emotions Are Relevant to Educational Leadership

In the last two decades or so, there have been calls for balancing logic and artistry in leadership (Deal and Peterson 1994), for leading with teacher emotions in mind (Leithwood and Beatty 2006), and for passionate leadership (Davies and Brighouse 2008). Moreover, empirical work has indicated that emotions are powerful forces in school leaders' lives warranting attention (Berkovich and Eyal 2015). There is also growing evidence in the research literature that the affective world of school leaders is both complex and intense (Samier and Schmidt 2009). School leaders are confronted on a daily basis with a variety of emotions that are inextricably linked to personal, professional, relational, political, and cultural issues.

The school leaders' emotional struggles have significant implications for their decision-making, well-being, and overall leadership style. School leaders are constantly engaged in emotion management processes, often with serious implications not only for their emotional health but also for their professional effectiveness (Blackmore 2011); at the same time, however, research also documents how mechanisms of emotion management help school leaders promote their own agenda, survive the high emotional demands of school leadership, and bring meaningful changes to their school (Beatty and Brew 2004). School leaders' handling of the emotions in their own reflective practices and in their relationships with

parents, students, and faculty shapes and reflects the climate and culture of their schools (Leithwood and Beatty 2006).

In general, it has been suggested that emotions are asserted for understanding educational leaders in four ways (Berkovich and Eyal 2015). First, emotional experiences and their displays in educational organizations are manifestations of leaders' visions, desires, and fears. For example, positive emotions may indicate the fulfillment of a desired goal, while negative emotions may be indicative of the opposite. Second, educational leaders' behaviors have an impact on the emotions of those with whom leaders interact. For example, teachers' negative emotions may indicate unfavorable leadership behaviors; on the other hand, teachers' positive emotions may be indicative of favorable leadership behaviors like transformational and supportive leadership behaviors. Third, it has been suggested that leaders' affective abilities (or "emotional intelligence") are more likely to promote desired organizational outcomes, because leaders are enabled to control their own emotions or direct the emotions of others toward desired goals. Fourth, educational leaders' emotions may be influenced by macrofactors and social structures that have made educational leadership work to become more conflicted and political. Thus, economic, social, and political conditions influence the work of educational leaders and their emotional lives, and, therefore, their desired work outcomes.

Approaches in the Study of Emotion in Educational Leadership

Generally speaking, the study of emotions in educational leadership has followed three major approaches: the psychological approach, the sociocultural approach, and finally the feminist and critical approach. The strongest influence has been from psychological theory, management theory, and brain science, particularly Daniel Goleman's work on emotional intelligence; the influence from feminist social theory, critical organizational theory, the sociology of emotions, and critical pedagogy has been less, yet it seems to

gain considerable ground in recent years (Blackmore 2011).

The psychological approach treats emotions as individual, private, and autonomous psychological traits and states. The influence of this approach has been mostly evident through Goleman's notion of emotional intelligence. Emotional intelligence is being mobilized in educational leadership to urge teachers and leaders to handle the emotions of themselves as well as those of others and to develop emotional literacy. The notion of emotional intelligence has been translated into the educational leadership literature as a new source of leadership strength (see Blackmore 2011). Therefore, it is argued that emotional management is important for the success of organizations, including educational ones; in fact, emotional intelligence is linked to the success of one's leadership style. For example, for those who are able to express and manage their emotions appropriately, it is suggested that they are more capable to achieve influence over others and be more effective in creating a productive professional environment. The methods of data collection grounded in the psychological approach are usually questionnaires and emotional intelligence tests; the epistemological assumption embedded in these methods is the notion of emotions as individual, psychological traits.

The psychological approach has been critiqued because it focuses on the leader as an individual and fails to address the limits and possibilities arising from the contextual and situated relationships in which the leader works (Blackmore 2011). Furthermore, the social and organizational cultural dimension of emotions is taken as given with the assumption that leaders work within the frame of existing social and organizational conditions. There is no theorization of the relationship between agency and structure, no theory of how power works in organizations, and little discussion of the emotional economies of organizations; instead the organization and the leader (with his or her individual emotions) are treated as universal concepts, without specific histories or identities formed and negotiated through complex social relations (Blackmore 2011).

E

Recent studies on emotions and educational leadership are following the growing trends in educational leadership research toward a social and organizational cultural approach (Zorn and Boler 2007). This approach moves beyond a focus on leaders in specialized roles and toward seeing both emotions and leadership embedded in a social and organizational environment (e.g., see, Leithwood and Beatty 2006). Additionally, this is a departure from the view of emotions through individualist and psychological terms toward a perspective that also recognizes the sociocultural dimension of emotions. Research following this interactionist view of emotions and educational leadership emphasizes that emotions and leadership are influencing each other, and thus, there is an interrelation between emotions and their social and organizational setting.

The sociocultural approach has also been critiqued (see Blackmore 2011; Zembylas 2009) for conceptualizing emotions and social settings as individual forces that act upon each other (Zorn and Boler 2007). That is, there is still a dualistic view of educational organizations in which individuals experience private and autonomous emotions which act upon and are influenced by organizational culture. Even Beatty's social and organizational analysis of emotions in educational leadership through a social constructionist lens (see Leithwood and Beatty 2006) makes the problematic assumption that organizations are either constructed or pregiven (Zorn and Boler 2007). Her approach assumes that emotions are still perceived as private experiences located in the psychological self (e.g., successful leadership is associated with personality characteristics), thereby failing to really take into account the power relations and the role of social and political structures in forming feelings in teachers, learners, and leaders.

Recent work in the social sciences (including cultural studies, feminist studies, sociology, political science, and communications) increasingly recognizes emotions as part of everyday social, cultural, and political life (Zembylas 2009). Emotions in leadership, therefore, are not only a psychological matter but also a political space in which school leaders, teachers, students, and parents interact, with implications for larger political and cultural struggles for change. In the emergent new approach, the social and political dimensions of emotions are recognized, offering important insights in educational leadership, organizational change, and school reform literature. As a theoretical construct, the notion of emotions as relational and contextual – which also implies a move from psychological methods of study to sociological and anthropological perspectives – highlights how culture and politics relate to emotions. This theorization of emotion contributes to a different understanding of educational leadership in which issues related to the social and political factors influencing leaders' emotions, the leaders' emotional practices and their impact on school culture, and the "affective economies" under which educational leadership is enacted become the center stage of interest.

Major Findings of Research

Following the above approaches, there are three core themes emerging from findings on emotions and educational leadership in the last two decades (Berkovich and Eyal 2015; Blackmore 2011): (a) how leaders express their own emotional experiences; (b) what the effects of leaders' emotional experiences are on others; and, finally, (c) whether emotions and leadership are understood as abilities or as social practices that arise within particular social, cultural, and political settings. Each theme is briefly discussed below.

In relation to the first theme, research findings indicate that there are three kinds of factors that influence leaders' emotional experiences and their displays: (a) contextual factors at the macro- and microlevel, (b) leadership role factors, and (c) mission-related factors (Berkovich and Eyal 2015). Contextual factors concern issues of sociocultural power relations at the macrolevel (e.g., gender, race, social class, poverty, ethnicity, and age) that shape emotional norms within a society or an educational organization and influence leaders' emotional expressions and displays. For example, neoliberal educational policies promoting accountability and competition influence

leaders' emotional experiences, evoking negative emotions that have an impact on leaders' work (Blackmore 2011). Similarly, the lack of professional autonomy or sufficient organizational support and positive climate at the microlevel evoke unpleasant emotions in leaders. Furthermore, leaders' emotions may be influenced by several key characteristics of the educational leadership role such as structural isolation and workload (Berkovich and Eyal 2015). Finally, factors that are relevant to the mission of leadership in itself – e.g., resistance and obstacles in the pursuit of social justice and equity – seem to be associated with leaders' negative emotions; on the other hand, positive emotions are evoked when there is some success in overcoming resistance and obstacles. Leaders seem to develop a variety of strategies for coping with the emotional and structural dimensions of mission-related leadership.

In relation to the effects of leaders' emotional experiences on others, findings show that leaders' emotionally supportive behaviors (high or low) appear to be particularly important because they affect others' emotions (Berkovich and Eyal 2015). Thus, relationship-oriented behaviors focusing on supporting others and promoting their needs have a positive impact on others' emotions. These behaviors influence the emotional climate of the school, although there is no evidence whether they directly or indirectly influence the learning outcomes. On the other hand, mistreating behaviors by leaders (e.g., aggressive, controlling, or abusive behavior) seem to have harmful effects on teachers' emotions. The methods used to study the effects of leaders' emotional experiences on others are both quantitative and qualitative, but given the emphasis on behavior, most of the studies are influenced by behavioral and social psychology.

Finally, in relation to how leadership and emotions are understood and enacted as social practices that arise within particular social, cultural, and political settings, there seem to be two different directions followed. On the one hand, there is a focus on leaders' emotional abilities – grounded in the exploration of emotions around the concept of emotional intelligence (see Berkovich and Eyal 2015). Studies are primarily quantitative (e.g.,

using self-reports) and show that leaders' general emotional intelligence abilities are correlated with transformational leadership behaviors. Qualitative studies also indicate that leaders acknowledge the significance of empathetic abilities for the leadership role; empathetic abilities are also valuable for mission-related factors such as social justice transformation. It is suggested that empathetic abilities can make a difference in the organizations climate and professional relations and that such behaviors can be developed by training. Moreover, it is shown that educational leaders use a variety of strategies to regulate their emotions. As such, self-regulation of emotion is considered an important ability in enacting the leadership role in order for the leader to appear in control of himself or herself and the situation.

On the other hand, feminist and critical leadership literature is concerned with how leadership is entangled with emotions as gendered and racialized practices (Blackmore 2011; Zembylas 2009). For example, there is evidence how women have often been pathologized for their emotional expressions, being positioned as emotional and weak and not effective leaders but natural carers/teachers of young children. Emotions, then, in this body of educational leadership literature, are theorized as sites of both social control and power. This perspective challenges the body of work that sees emotions as just located within the individual, but rather recognizes that educational leadership is embedded in social and political structures and unequal power relations. Research that is conceptually grounded in this perspective shows how emotion is displayed, perceived, and understood differently according to the gender, racial, cultural, and political positioning of the leader and the norms of the organization or society. The tensions that arise as a result of the "politics of emotion" within a particular setting also highlight the deeper ethical struggles for those concerned with social justice and transformational leadership.

Conclusions and Implications

This entry focused on findings and methods about the emotional aspects related to educational

leadership during the last two decades. The discussion showed that the field is still in its early developmental stage (Berkovich and Eyal 2015). Although the emotional dimensions of educational leadership are widely recognized in the literature, the dominant approach does not draw from feminist social theory, critical organizational theory, the sociology of emotions, or critical pedagogy, but rather from psychological theory (Blackmore 2011). However, recent work into the "politics of emotions" creates new openings for enriching our perspectives about the dynamics of affective relations in the political landscape of the school culture. These openings have to do with a critical understanding of the role of emotions in the constitution of power relations in educational organizations, how emotion discourses are formed and mobilized, and what their political implications are. To study emotions in educational leadership within this theoretical framework allows the exploration of spaces that move beyond theories that psychologize emotions and treat them as internalized (e.g., psychoanalysis) or structural theories that emphasize how structures shape the individual (e.g., Marxism). In this sense emotions are neither private nor merely effects of outside structures. The role of power relations in how affective economies are constructed directs attention to an exploration of emotion discourses and the mechanisms with which emotions are "disciplined" and certain norms are imposed and internalized as "normal." This kind of theorization allows educational leaders first to identify such discourses and then to destabilize and denaturalize the regimes that demand certain emotions be expressed and others disciplined.

The contribution of new approaches in researching and theorizing emotions in educational leadership amounts to an intervention in a much larger debate about subjectivities in school culture, in which concepts of affective elements of consciousness and relationships, community, and reform are slowly being reexamined (Zembylas 2009). This sociopolitical dimension of emotions in educational leadership creates the difference between possible and real transformation, and it is this difference that constitutes the power of the more recent theoretical ideas presented here as critical "tools" to challenge contemporary discourses about emotional intelligence in educational leadership – discourses which are caught in the obsession for performativity, efficiency, bureaucratic rationality, cultural assimilation, moral self-control, and normalization of "emotional skills" (Blackmore 2011). The need for a deeper conceptualization of this sociopolitical character can guide future research on emotions in educational leadership in whatever locality, research informed by a genuine search to understand the power and the limitations of the political merits or demerits of any affective economy within an educational organization.

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Environment and Education

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Synonyms

Education for sustainability; Environment-as-an-integrating-context; Environmental education; Nature-based education; Outdoor education; Urban environmental education

Introduction

Environment and education have been primarily understood in two main ways in educational philosophy and theory in much of the English-speaking world. In brief, these ways tap into (a) questions of surroundings and relations to those, and (b) what is worth knowing, valuing, and doing about patterns and changes in our interactions with our environments.

The connection between the two is most apparent when environmental educators consider the positive and negative effects of human-environment interactions and livelihoods on the conditions for living and flourishing on earth for all its inhabitants – human and otherwise – more broadly, not just those in which people dwell. Thus, in this entry, while the main focus in environmental education is on the second aspect, the first will be sketched too, as it sets the scene for various cross-cutting considerations about environment and education.

Experiencing a World Around Us

The first sense mentioned above taps into the familiar conception and meaning of environment as *that which surrounds* and to which *an organism responds and adapts*. Implicit within this is a sense that people's engagement with their

surroundings has multiple dimensions (Ingold 2000): it is intellectual as well as sensuous, aesthetic as much as a matter of ethics, involves volition and emotion and not simply cognition, and is historically conditioned even if it also remains indeterminate, i.e., open to the possibility of change.

Following this line of reasoning, an environment forms the grounds and sources for various options and activities of dwelling, personhood, security, reciprocity, economy, and identity formation (and their disruption), for individuals and groups. In other words, for this entry, it behooves us to recognize that all education takes place in an experiential space, and following phenomenological considerations, *being in place* is where one comes to know others and is known to others.

As Bonnett (2004) notes, terms such as *oikos* (as home), *khôra* (as a key root for understandings of space), and *topos* (the equivalent for place) communicate much of the existential dimensions to a sense of both the conditions and contexts of talk of environment. They also hone attention on what is concrete, specific, and particular to people living in habitable places, in contrast to what is abstract, idealized, or mythic for our experiences in and across some of the diverse environments, lifeworlds, and possibilities for life on this planet. Thus, an "environmental education," as an important way of bringing these matters together, may involve elements of environmental awareness and nature appreciation (e.g., fostering a sense of awe and wonder, grasping the aesthetics of the sublime and picturesque), as much as lead to a questioning and even rejecting of certain ways of living in particular places, by becoming aware and appreciating their connections to others, e.g., through colonialism, globalization, and accelerating consumptionism.

To return to the first sense though, in educational and developmental psychology, a key concern is what an environment affords a learner during different phases of an individual's lifespan, taking into account their motivations, intentions, ableness, and behaviors when interacting with an environment. Thus, from early childhood studies and experiential education to many of the models of developmental psychology and phenomenology that can inform aspects of educational philosophy and theory, a key focus is on the gaining of capabilities and insights to interact with an environment, particularly through motor skills and cognitive development. These might include through the discovery of new opportunities for movement shifts in perception and worldview, and novel forms of interaction for an individual with an environment into adulthood (see, Sheets-Johnstone 2009), e.g., through outdoor education, environmentally sensitive arts programs, or a "green skills" training syllabus for adults in the vocational sector. Teaching and learning in a range of high-quality environments – and ensuring those afford rich educational experiences – are key corollaries for this sense of linking environment and education.

However, the "baggage" associated with such a view must also be elaborated, by recognizing that environment is typically assumed to require a degree of naturalness to the spaces surrounding an individual, e.g., in outdoor settings or in places for play, discovery, navigation, adventure, instruction, and gainful employment. For educators, while this "intentional field of significance" (Bonnett 2004) is usually recognized as co-constructed, for an individual learner, the environment may still be assumed to be one beyond the traditional classroom setting. Indeed, it may be on *terra firma* rather than (say) water, often in rural settings rather than urban ones, in relatively pristine environments in preference to degraded ones, and with the teacher's and learner's attention steered towards the ecological rather than, for example, the economic realities of ways of living. This is despite a long tradition of a variety of approaches to studying environment and society, such as in geography, biology, and "home economics," as well as in alternative approaches, e.g., urban and built environmental education. Some of these can be traced to, for example, anarchist traditions of thought (e.g., Ward 1978) and more contemporary expressions in psychogeography with its interests in liminal and problematic environs (e.g., rooted in situationist perspectives). These alternatives tend to invite (or require) more of a focus on the experiencing and shaping of environmental consciousness and reflexivities

and, more recently, questions of affect and materiality in offering critique of human-environment interactions, as in exploring and our responses to (typically) urban, postindustrial, and derelict environments. Thus, a key area ripe for development in educational philosophy and theory is examining the significance of everyday places, spaces, and life to environment and education. These include how environments are appropriated, imagined, inhabited, and reworked through diverse intentions and interpretations of places and spaces; their shifting affordances and interactions, including in relation to those environments that might be marginal and/or hidden from society at large, including to its educators and learners (e.g., risky, mand undane, ambiguous, paradoxical, ecophobic or unattractive environments, as well as "non-places" – see Augé (1995), on the significance of motorways, hotel rooms, airports, and shopping malls to learning about "supermodern" ways of life).

Other new directions for educational philosophy and theory in this regard include incorporating insights from ecological anthropology and the environmental humanities. These shift the focus away from that of an individual's senses and meaning-making in two key directions, namely, towards (i) the sociocultural beliefs and practices in both adapting and maintaining environments and ecosystems, and (ii) studying and learning from a wide range of human responses to environmental challenges and problems and how these are represented – and possibly addressed – in historic, contemporary, and possible societal formations and worldviews, e.g., given currents in politics, economics, history, epistemology, and demographics.

A major concern can be voiced though, regarding the degree of environmental *determinism* that can be embedded in some of the assumptions at work in associated philosophies and theories of education, including within a broad sweep of "ecopedagogies." In brief, that exposure to selected and primarily biophysical environments can be assumed to predispose people to develop particular values, insights, behaviors, or societal trajectories, or put more strongly, that ecopedagogies inculcate these. We return to this concern in the next section,

but at this point, we note this situation contrasts with the emphasis in much social thought on *possibilism*, which seeks to recognize anthropological and democratic constraints and limitations, including matters of contingency and negotiation in the construction and outcomes of meaningful environmental educational experiences, e.g., in empowering eco-identities, sharing or deconstructing unsustainable social relations, and challenging environmental injustices. In other words, a possibilist focus affords a stronger emphasis on concerted and complex configurations of human interactions given, for example, various facets of structure and agency and on notions of success and failure in this regard, e.g., when learning from our mistakes with the environment. It also serves to shift the emphasis away from simplistically "reading off" pedagogical priorities from environmental conditions, e.g., the "earth education" of the 1970s and 1980s in the USA and the United Nations' versions of "education for sustainable development" of the 2000s. In both, while a sense of interconnectedness and transformation is strongly expected, in fact, neither has had the wide-ranging and far-reaching uptake and impacts that their sponsors and advocates have expected.

Given these observations, a key area of critique of "deterministic" readings of environment and education involves rejecting the uncritical promotion of what amounts to an adjustment mode in education, e.g., by "acclimatizing" to contemporary social issues. This approach is largely discredited in political and educational philosophy as symptomatic of an ideological project akin to neo-colonialism and, in relation to ecophilosophies more specifically, often harbors an unwitting continuation of majority lifestyles that exploit the earth. To illustrate, climate change education is not mainstream education, and it tends to focus attention primarily on strategies of *adaptation* or *mitigation* to what is largely unseen and unfelt, even if it is comprehendible and occasionally tangible or probable as a phenomenon. Its marginal status and the former strategy are critiqued as largely business-as-usual economically and politically; they also tend to ignore ecocentric and biocentric possibilities, particularly those interested in pursuing deeper forms of

environmental activism beyond reformism. However, the latter strategy is also critiqued too, because it seems to require such large-scale rethinking of the conditions conducive to the survival and flourishing of communities (biotically and abiotically) into the future (with concomitant major shifts in environmental policy, economic organization, and cultural configurations). Thus, it leads some commentators to wonder if educators have the capacity or traction to address these in the contemporary public sphere (see Orr 1994). An alternative, as Gruenewald (2003) puts it, is to further emphasize the spatial aspects of social experience in the form and substance of curriculum, via *critical pedagogies of place*. These require addressing the twin objectives of *decolonization* and *reinhabitation*, so as to challenge "all educators to reflect on the relationship between the kind of education they pursue and the kind of places we inhabit and leave behind for future generations" (p. 3). But again, questions can be asked as to whether the post-naturalistic turn in environmental philosophy has yet to been taken into account in such ecopedagogical thinking or even the post-humanistic turn in educational philosophy more generally (e.g., Haraway 2013).

For educators and educationalists then, key questions might arise regarding the educative value of contemporary forms of environmental education and the visibility or otherwise of environmental topics in education in general, including how these are conceived and construed. Orr (1994) once observed that it is the most educated in conventional Western forms of schooling who have the largest footprint on the planet, given their careers and lifestyles, but also their perpetuation of the prevailing economic system, built as it is on continuing to strain both the resources and capacities of people and planet to be resilient and diverse. Thus, rather than focus on questions of whether exposure to, for example, wilderness as part of a person's formal education is an essential requirement for schooling, or whether field-based experiences offer extrinsic and intrinsic value to teaching and learning, key questions for educational philosophy and theory can become those of the relation of people-environment interactions to larger social structures of community, culture,

society, economics, and politics – and education's role in all this.

All Education Is Environmental Education: For Good and Ill

The second understanding identified in the introduction crystallizes many of the preceding concerns. It relates to the modern concept of relation and response to environmental conditions, particularly in light of their degradation and destruction, at local to global scales. The primary concern for education here is exploring, understanding, and appreciating the extent of the consequences these changes have for human and other (mainly animal) species, and the ecosystems on which all depend in the immediate to longer term. Given the severity of some of the threats associated with the so-called environmental crisis, key questions for educators and educationalists include the following: Can education address all aspects of the environmental crisis? What should be the focus and priority of such work? And, when do interventions to address the crisis become "uneducational"? Put otherwise, a counterintuitive question is, is education as much part of the problem as part of the solution, including via an "environmental education" that seeks to address this?

In the remainder of this entry, we briefly consider some of the intellectual resources for responding to such questions.

First, scholarship on key environmental issues typically traces a wide range of shifts in conditions, understandings, the sciences, and the histories of awareness and action about environmental problems. In brief, in the West, the birth of the Romantic movement and the Industrial Revolution has become emblematic of early concerns about air pollution in industrial centers, where awareness and understanding eventually lead to legislation to curb emissions. During the mid- to late nineteenth century, the conservation movement associated with forestry in India, Europe, and North America provoked fuller considerations of such principles as stewardship and sustainability, and an emphasis on the role of civic

and scientific responsibilities to manage natural resources for current and future generations. Environmental protection and wilderness preservationist societies as well as restorationist and "back-to-nature" movements sowed many of the seeds for what has become modern environmentalism (most often associated with figures such as John Ruskin, William Morris, John Muir, Henry David Thoreau, Gifford Pinchot, Patrick Geddes, Aldo Leopold, Rachel Carson, and Ansel Adams) including its extension, some would argue, into the environmental education movement, in the 1960s. Thus, within education, the content knowledge about such key concerns has often come to focus on sifting through the various phenomena and impacts of contemporary and prevailing patterns of human-environment relations and identifying the scale, interconnectedness, likelihood, and urgency of their effects on conditions for living now and into the future.

Typical environmental concerns since the postwar period have ranged from growth in human population and resource demands; pollution of air, land, and water; overfishing of the oceans; destruction of tropical and temperate rainforests; extinction of entire species; depletion of the ozone layer; build-up of greenhouse gases; desertification; wind and water erosion of topsoil; disappearance of farmland and wilderness because of encroaching development ... yet as the nature educator, David Sobel (1996, p. 10) has cautioned, "what's important is that children have an opportunity to bond with the natural world, to learn to love it, before being asked to heal its wounds."

Second, more recent strands and splinters of academic activity have continued to raise questions of praxis, particularly in relation to themes of environmental health and justice, political ecology, Gaia theory, biophilia, deep ecology, ecofeminism, anti-consumerism, eco-socialism, post-materialism, ecotheology, weak and strong sustainable development, ecological economics, environmental aesthetics and hermeneutics, greenwashing, ecojustice, permaculture, animal rights, the Slow movement, among many others. In their own ways, these raise important considerations for educational philosophy and theory

(Luke 2001), most notably, the range of ideas and assumptions in play that reinforce or critique the anthropocentric bulk of what counts as knowledge and knowing, and the priorities for teaching and learning particularly in relation to human and "more-than-human" well-being in times of pressing and acute environmental problems, locally to globally.

Third, how anyone responds to such lists is often seen to be a feature of how "green" a person is, in recognition that various shades of environmental (and) educational thought are available. For example, "light green" conservationists are likely to be more anthropocentric than the ecocentrically oriented "dark green" deep ecologists, while ecofeminists may have overlapping strategies and tactics for change with some but not all of the approaches taken by social ecologists, militant "ecoteurs" in "monkey wrench gangs," if not the gradualists aligned with nongovernmental organizations such as the Sierra Club and the North American Association of Environmental Education. However, while views on the role of lobbying vs. direct action and their educational relevance and rigor may differ considerably, what unites many environmentalists and educators in this field is the idea that humans are part of nature and members of a larger and more inclusive "biotic community" than crude human exceptionalism suggests. Thus, people have obligations or duties to each other in the present, and to future generations, to support biological and cultural diversity, and to work for justice and peace in human actions and practices. Exactly how these themes and their prioritization are worked out has been picked up most recently in debates about the scope and reach of the UN's Sustainable Development Goals, including in relation to Goal 4 which is focused on Education.

Conclusion

Attempts to environmentalize education can be readily understood alongside other notions in curriculum theory that try to intuit a matter of concern and a curriculum response. Thus there is an explicit curriculum in this area, but this may or not contain

aims and content related to (all) environmental topics. Then, given the notion of a hidden curriculum, we must also recognize this may go against the grain of those or offer a supplement or corrective (e.g., by greening the educational institution's grounds, buildings, supply chains, community relations, etc.). Also noting the received curriculum, we can recognize that what is proposed may not transpire in the experience of students or staff, perhaps because it is interpreted and possibly contradicted by other dominant interests in education. In other words, these features trouble simplistic notions of indoctrination in education by "environmentalists," the likelihood of technocratic authorities coercing particular responses to environmental problems, and that the current generation in schools will automatically be able to address the intra- and intergenerational aspects of environmental issues, even if the problems are largely those they've inherited.

Cross-References

▶ Environmental Activism
▶ Environmental Learning

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Environment and Pedagogy

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Synonyms

Complexity theory; Ecofeminist pedagogy; Environmental subjectivity; Postcritical pedagogy; Transformative learning

Introduction

Discussions concerning environment and pedagogy are typically located within fields related to environmental education (EE) and education for sustainability (EfS). These fields work across spheres of outdoor, experiential, and critical ecopedagogy as well as ecofeminist pedagogy, philosophy of education, and curriculum. They ultimately rely on philosophical positionings that relay various culturalist and materialist perspectives, reveal complex socio-political commitments, and occupy discourses that govern specific educational contexts.

Nevertheless, environmentally and culturally sensitive pedagogy is practiced within educational situations where ideals of plurality are also adapted to align with educational and societal metanarratives (typically patriarchal, neocolonial, capitalist). Thus, environment-related pedagogy freights various tensions and contradictions into the general education of young people and lifelong learners.

In such circumstances, environment-as-pedagogy would most likely work to foster caring relationships at several levels of consciousness. These range from learning about meanings of

direct experience in natural places to those of values that implicate certain worldviews within knowledge structures of education and society. Recently, however, several commentators on the fields of EE/EfS have suggested a need to expand our repertoire of "pedagogical arts" in ways that reconceptualize and practice critical pedagogies across a growing range of applications, including in ways that challenge extant sociocultural and socioecological agendas. What seems most difficult to grasp concerning a broadened pedagogy – particularly when conceived as emotional, embodied, and emplaced – is how this implicates learning experiences in identity construction (i.e., subjectification processes).

An initial response might be to introduce complexity into talk of pedagogical practices, using sensitizing strategies that are at once intercultural, natural, action oriented, community based, and interdisciplinary. More theoretically innovative and politically crucial, however, is thinking beyond the limits of pedagogy, including in ways that will not foreclose on those moments of intersubjective articulation of environment and pedagogy but also interrogate the performative.

New Beginnings?

Environmentalism, it is said, conveys an ethico-historical imperative that connotes humanity's ecological responsibilities. Indeed, a variety of shades of environmentalisms have emerged, ranging from discourses of sustainable development to those of deep ecology, the common assumption being that are broadly united by a growing desire for action towards a more socially and environmentally just world.

As an ethical base for educators, environmentalism can serve as a justification for teachers' existential, political, professional, and personal quests toward embracing pedagogy beyond traditional educational discourses and practices. With an historical and intellectual dimension too, these can be mapped at several levels of thought, including by implicating imperatives of care and responsibility for the natural world.

This caring for the environment resonates with the pastoral concern for future generations and thus for pedagogical care as part of an educator's ethical responsibility. The concept of responsibility encompasses expanding levels of care from personal and social values to include environmental values. In these terms, all forms of pedagogic care have sociocultural and political dimensions and may also connote forms of critical pedagogy that work both within and against traditional education.

In this regard, critical forms of pedagogy, including ecopedagogy, interrogate taken-for-granted interrelations across cultures, environments, and governance structures that produce ideological and hegemonic mainstream educational theory and practice. Critique is intended to not only reveal social inequalities and disadvantages but to also provide means for change as participatory actions for a more socially just and ecologically sustainable world. The point is that if concerns about social and environmental justice are warranted, they must remain part of the argument for pedagogical change and by implication, curriculum change.

In Freirian (2013) terms, the philosophical challenge for education, as for society, is stark: how to penetrate the thick wrapper of existential, political, personal, and practical commitments that always already occupy societies. Environmentally sensitive pedagogies are thus implicated in micro-politics that expose macro social, and thus educational, forces of power. Questions of purpose for environment and pedagogy become questions of social and environmental values fundamentally grounded in ways of knowing and being (i.e., onto-epistemic positionings).

A deeper and broader view of "eco"pedagogy also draws attention to operations of politics and power at educational policy levels and how policy discourses become curriculum and praxis. Not seeing "culture-nature" as fixed but as something that changes as young people's identities are (trans)formed means that crucial issues of pedagogy and learning must be addressed, be they institutional priorities or teachers' usually tacit pedagogic beliefs. Even if such perspectives were manifest as curriculum imperatives

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governed by societal values, there also remains the question of clarity of teachers' positionings and roles in "educating" and making sense of curriculum/policy, such as in relation to perpetuating a "politics of unsustainability." Accordingly, matters of teaching/learning strategies, interactional methods, community and cultural environmental responsiveness, and spaces/places/learning contexts must also be addressed.

To illustrate, environment and pedagogy intersect as "emplaced" EE. This involves stepping out of school to explore what counts as knowledge production in diverse learning environments. In such places of learning, says Ellsworth (2005), we must explore what it means to think of pedagogy not in relation to knowledge as a thing made but as knowledge in the making. Thus it may be in spaces between emotion and cognition that sensation has ontological priority over language and knowledge, including in pedagogy.

Environment-Pedagogy and Learning

Pedagogy has become, in recent years, a notoriously elusive construct at the heart of complexities of educational change. In the writings of many environmental educators, there is a suggestion that something is missing that surfaces at the interface of environmental theory, pedagogy, and change. Empirically, numerous articles in EE/EfS periodicals have raised questions about the theoretical groundings of educational inquiry and generated thinking about ends-means questions. In EE research journals, questions also concern how theoretical and political agendas are informed by particular research agendas. However, important questions remain about environment-related pedagogy, questions about the complexity of theory-practice thinking or of postcritical ecological ontology and pedagogy and about the politics of difference that demands material engagement across hybrid subjects in transformative and performative (environmental) education.

In order to merge questions of inquiry and pedagogy, it seems timely to (re)consider what may emerge more explicitly from onto-epistemic

assumptions and critical praxis emplaced and replaced as materialist performative and post-human perspectives. Of course, overriding political questions remain about why a long-desired integration of "environment" with general education pedagogy has not been achieved and does not seem imminent – why an anthropocentric worldview has not been replaced with an ecocentric one, for instance. The response in educational policy struggles regarding environment and pedagogy is limited: it remains within dominant discursive/material structures of society. But it is equally important for educators and curriculum policy authority to retain a critical attitude in relation to pedagogy, environment, and learning.

A key postcritical concern is how to be ethical, generous, and kind when the playground of academia resembles "Hunger Games" (Koro-Ljungberg et al. 2015). Overlooked in the management of education systems is the level of theorizing that tends to separate production of knowledge (i.e., matters of fact) from the production of subjectivities (i.e., matters of concern) in contexts of teaching and learning. If environment-related education and pedagogy is as concerned as it says it is with the production of eco-identities and subjectivities, and if educational inquiry has matured beyond attitudes and values, then postcritical notions of teaching as becoming ethical, as generous/kind and generative (even when the playground of education is not), become important. Teachers more pedagogically savvy of the theoretical/conceptual importance of connecting goals of education (including EE/EfS goals) have purchase in enabling experiences strategically, within almost any educational framework, to (re)construct their curricula accordingly.

Treating teachers as intellectuals capable of theoretical work within the power relations of educational systems is possible if teacher education programs, reconceptualized as pedagogical spaces for collaborative (teacher-student) constructions of meaning, can get beyond the divides of theory/practice, science/aesthetics, and mind/body. Making layers of past ideologies visible in nondeterminist and nonessentializing modes of both feminist poststructural and new materialist approaches may go a long way toward

engaging identities/subjectivities as part of reconceptualizing socio-cultural-environmental frameworks for pedagogy. At issue is engagement of theory at levels of consciousness that trouble concepts such as environmental discourse, nature, and the environment itself that are themselves changing, as are concepts of (environment-related) pedagogy. Thus, for environmental theorists and educators it would seem unwise to ignore onto-epistemic dimensions (an ethics of being and knowing) in constructions of EE.

Bridging Theory-Practice Gaps

An overwhelming impetus from critical education of the 1980s and 1990s was to challenge colonization and oppression of teachers and students from every angle. If poststructural theorists were right in describing the subject as a discursive process, then pedagogy as an attempt to intervene in ongoing processes by which the subject was fashioned should also have purchase in fashioning environmentally sensitive subjects, even if in "willful contradiction" to dominant social discourses.

Nonetheless, education is never a neutral process, as Paulo Freire (2013) pointed out. Either it facilitates integration into the present system or facilitates change or transformation. For the last half-century, educators who have "environment in mind" have been anticipating new pedagogies, at once relational, experiential, and community oriented, as projects shared with critical, feminist, and posthumanist educators engaged in practicing "alternative" pedagogies. Many of these pedagogical encounters were intended to go beyond previous critiques of education, cognizant of the dangers of perpetuating the very forms of authority that environment-related programs sought to "modify." Yet stories of EE, full of good intentions, were then subsumed by institutional cultures and research that ignores theory-based pedagogical shortcomings.

Many critical environmental educators have continued to work toward reconfigurations of pedagogy outside community values of competitive individualism, anthropocentric knowledge structures, and neutral inquiry methodologies across identity positions of race, class, gender, culture, and environment. In fact, in the larger fields of education, new theoretical trajectories portray pedagogy as incomplete unless characterized by some form of intervention in the unconscious through interchange between the teacher and learner (Ellsworth 2005). Teaching is implicated in the very formation of the personal unconscious self, as a kind of unmeant knowledge which escapes intentionality and meaning and which the subject cannot recognize. To engage with authority is most effective (in willful contradiction) but has been least calculated. What feminist materialist pedagogies have recognized is that EE, if practiced as traditional pedagogy, cannot get at this unmeant knowledge. Rather, in assessing relationships between teacher and student, it is argued that both can learn how to theorize rather than simply recount their experience. In such forms, both teachers and students can reflect critically on how that experience is woven into the fabric of the unconscious discourses of traditional educational and social systems.

This is where critical pedagogy becomes postcritical. "Post" takes on meaning in moving the "critical" beyond resistance narratives to view relational ethics, aesthetics, and politics as performative of social agency. Agency, so reconfigured, at once implicates the onto-epistemic governance of the subjective effects of pedagogies. Thus if we assume that an environment-pedagogy connection implies agential forms of pedagogical praxis in transforming education, inclusive of environmental ethics, then changes have to occur at all levels of educational provision but especially within the performativities of teacher educators and teachers themselves.

For Todd (1997), the crucial question concerns the indeterminacy of desire for change, the notion that we cannot make others want to take on an ethic no matter how socially or environmentally just. However, because we can assume that people are not immutable to the educational experiences and contexts provided, nor unaffected by systems of representation, teachers can create the kinds of pedagogical spaces and places that impact identity and ethics in certain ways.

Transformative educators recognize language games and learning environments, as well as conscious selection of particular spaces and places, as part of the pedagogical dynamic in transforming the "discourse" of the class and the identities of participants. These educators often go out on an institutional limb to make particular experiences part of the subject matter. While this may not sound different, incorporating discussions of values and ethics and worldviews into (re) interpreting the "discourse" of the class (in terms of one's public identity and political commitments) can open discussions of unconscious desires and conditioned responses. Notwithstanding the danger of abuse/indoctrination in open discussion forums, it is argued that such activity offers no greater risk than currently exists as desires/identities circulate within and without education. Even so, pedagogy is always risky but risks might be viewed differently if desire and identity theory become subjects of the debates. The pedagogical point is to allow space for self-interpretation in ways that make evident how that self is profoundly connected to social roles, discursive systems, and intersubjective relations implicated in other people's lives. This requires a different kind of pedagogical understanding in order to interpret the interchange between teachers and students.

Environment-Pedagogy Reconsidered?

An ethically generous post-ecocritical turn as part a new generation of agentive realist inquiry understands pedagogical thinking as between bodies and agents rather than as localized inside the mind of an isolated teacher. Pedagogical knowing is a matter of going beyond the human/nonhuman divide and acknowledging our coexistence with the rest of the world. The relationality of pedagogy as a locus of ethical responsibility opens toward qualitative dimensions of learning in which we also attend to affective dimensions of knowing. For environmental educators to engage transformative educational agendas requires conceptual exploration of a range of cognitive and affective tensions, such as onto-epistemic breaks with discursive practices that limit the possibilities of new knowledge. While environmental educators continue to press for greater school emphasis in curriculum and pedagogy, these deeper philosophical arguments cannot be assumed to have already taken place. Exploration of ways that our pedagogies represent knowledge and being in the world (our onto-epistemic groundings), as warrants for curriculum and pedagogy, become central questions for a renewed educational philosophy and theory. Questions of the politics of change and individuals' professional self-narratives, as well as the discourses that these narratives valorize, require levels of self-reflection that can expose and address tacit philosophical alignments and pedagogical preferences. In other words, environment as theory/discourse (within one's subjectivity) requires the development of strategies that illustrate how new emerging methodologies may transform practice through differentiated engagements with pedagogy.

Finding alternatives that work toward social-relational environmental goals to bring new ideas and perspectives to education implicates, for example, public argumentation concerning new theories and practice. The common ground becomes the theoretical-pedagogical meeting place for collaborative dialogue and planning to introduce and critically engage new perspectives. Within environment-pedagogy framings, questions of how we are to teach and learn, understood as relational collaborative processes within different onto-epistemic frames of knowing and learning, are no longer simply about human but the nonhuman material world as well, profoundly aware of the learner's identity formation/subjectification. Challenges for pedagogues with environment in mind go beyond the traditional and "alternatives" polarization. In point of fact, one could regard environmental educators' earlier attempts as a kind of archaeological pedagogy of attempts for changes in education systems related to profound global changes in knowledge, environments, and societies over half a century.

These changes have generated new knowledge about knowledge networks (Peters 2004) that have provided the substance for rethinking what counts as knowledge. They have created conditions for rethinking formal education through lenses of reconceptualized pedagogy grounded in both philosophical and practical debate. Although arguably the field of EE has had few theoretically based inquiries, it could be argued that a field somewhat under-theorized and under-researched can be reengaged with epistemic and ontological ideas, as Latour (2004) says, from matters of fact to matters of concern.

What might become of pedagogy if educators were to reconsider it in terms of the "responsible uncertainties" (Sellar 2009) of multiple onto-epistemic inquiries? If environment-related pedagogy, for example, could be framed as relational processes in ways that privilege intra-activity beyond normalizing discourses, then researching the in-between spaces and edges of identity limits may afford students the opportunities to narrate and reflect on what has occurred. Such is the new literature framed on relational processes that have ontological primacy over the knowledge and identities produced. Even as elusive concepts, environment and pedagogy demand complex inquiry of the unpredictabilities of the pedagogical relations as social and contextual. As Ellsworth (2005) says, pedagogy teaches but does not know how because we come to know onto-epistemically as learning only after it has taken place – as affect prior to cognition – in relationship.

Environment-related pedagogy, whether or not its practitioners know it, have always been caught up in Bateson's (2000) idea of "breaking away" from traditional prescriptions of curriculum, instruction, and pedagogy. The message for fields of study such as EE/EfS is to become more cognizant of the depth of their own problem and to engage pedagogy with transformative agendas in relation to shifting worldviews as a base for shifting praxis. As Hipkins et al. (2010) argue, unless environment-pedagogy relations in theoretical and practical

work actually "get" the profound philosophical shift in conditions of knowing, then EE practice may continue to do what it has always done. Rethinking pedagogy in terms of onto-epistemic referents may be regarded as developmentally appropriate growth in epistemological sophistication (Egan 2008).

Cross-References

▶ Environmental Activism
▶ Environmental Learning

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Environmental Action Competence

▶ Environmental Activism

E

Environmental Activism

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Synonyms

Activism and environment; Environment and education; Environment and pedagogy; Environmental action competence; Environmental social movements; Sustainability and education

Introduction

Environmental activism is primarily linked to studies in the fields of environmental political science, environmental sociology, and environmental psychology. However, in this entry, the focus is on the relationship between environmental activism, on the one hand, and learning and education, on the other. Roughly speaking there are two major approaches to addressing this relationship. One belongs to the studies of social movements within the research fields mentioned above. The other is within educational research with a focus on environmental and sustainability education (ESE). However, before discussing these further, the concepts of environment and activism are briefly introduced.

The Concepts of Environment and Activism

Neither environment nor activism are strictly defined concepts nor are they interpreted consistently by scholars. For some, the environment is synonymous with nature, while for others, it is more specifically about conflicts of interests regarding humankind's stewardship of the natural environment. The concept is also blurred by the varying interpretations of nature over time, place, and culture and the intertwining of considerations of nature and culture, e.g., as nature-culture.

Furthermore, in relation to activism, environmental efforts are typically not restricted to the critique of environmental problems but also include efforts to solve those problems, leading to a broader concern with the policies and politics of sustainable transitions.

The concept of activism is also interpreted in diverse ways. A key issue here is whether activism can be considered more or less synonymous with the basic human competences of activity, action, and/or agency or whether it instead constitutes a specific form of agency. Activism is certainly an expression of human agency and consists of activities. Moreover, these activities are intentional and goal directed, which is often regarded as a key characteristic of actions. As a sociological category though, activism commonly (but not always) refers to collective, intentional actions aimed at changing a policy, societal institution, socio-technological or economic system, and/or culturally embedded practices.

Thus, there are several ways of differentiating environmental activism. For example, Bronislaw Szerszynski suggests a matrix to differentiate contemporary forms of environmental activism. One dimension distinguishes between purposive and principled action – the first aiming to achieve direct political results and the second concerned with changing values or behavior – while the orthogonal dimension differentiates countercultural and mainstream forms of practice. Inspired by this matrix, Andrew Jamison differentiates environmental activism as follows:

1. *Community environmentalism* which is oriented toward changing policies by creating spaces for dialogue between factual scientific information, technical suggestions for solutions, and local knowledge leading to the empowerment of local citizens
2. *Professional environmentalism* which is likewise oriented toward changing policies but mainstreamed in its professionalized organizational forms and techniques so as to gain success in concrete cases
3. *Militant environmentalism* which is characterized by a morally driven countercultural activism taking place in the public medialized space

4. *Personal environmentalism* which is value oriented but mainstreamed in the sense that it takes place within the established societal institutions as individuals' personal efforts to change their habits and green their lifestyle

These different ideal types have obvious consequences for the kinds of learning and educational efforts taking place, but before considering those in detail, we need to consider how these issues have been addressed by scholars in the field of social movement theories.

Environmental Activism in Social Movement Theory

The scholarship of "social movements" ranges from classical approaches focused on contradictions between social classes (such as when movements are collectively organized efforts to promote class interests) to approaches reflecting the sociocultural tensions of postwar Western societies where, for example, social movements are understood as agents of revolt against existing societal structures and cultures more broadly. Associated theories have developed quite differently in relation to environmental activism, with one primarily European socioculturally oriented strand standing in marked contrast to a primarily conventional empirical and psychological-oriented strand in the USA.

In Europe, Alain Touraine and Alberto Melucci are key figures in the historical reconceptualization of social movements. These movements were understood to challenge dominant cultural codes, acting with levels of information and communication also used by technocratic powers. Touraine and Melucci also characterized social movements as collective identity formations containing sets of values and beliefs that empower those who share and identify with them.

In concord with this conception of social movements, but also inspired by Jürgen Habermas' work on different types of knowledge interests, Ron Eyerman and Andrew Jamison (1991) developed what they termed a cognitive approach to the analysis of social movements.

Although it is a general approach to studying social movements, it was initially developed in relation to an empirical study of environmentalism and knowledge. For Eyerman and Jamison, the cognitive praxis of social movements is the social action from which new knowledge originates. By focusing on social movement agency as a matter of challenge to dominant sociocultural knowledge as well as a praxis for developing new knowledge and sociocultural identity, their approach focuses directly on the relationship between movement, learning, and education. Environmental activism is approached as creating, as well as taking place in, new public learning spaces. In these spaces, new cognitive practices are developed in struggles targeted at environmental improvements, while as a praxis, it also implies criticism of societally dominant forms of knowledge as well as new knowledge formation.

Inspired by Habermas, Eyerman and Jamison also analyze the cognitive practices of environmental activists, to explore their cosmological, technological, and organizational knowledge interests. Their work shows how social movements are not restricted to specific organizations with a permanence over time; rather, they occur in certain phases of societal transformations in which their strength as movements is dependent on their ability to learn and develop alternatives. These alternatives include all three types of knowledge interests in ways that are able to challenge and transform prevailing knowledge interests. However, this differentiation means that environmental activism does not necessarily develop into a social movement. For example, in his later work, Jamison points to a polarization of environmentalism into those working inside a green business or ecological modernization approach and those who use environmental issues to fuel their militant political activism. However, in his view, none of them offer new, alternative forms of knowledge. Rather, Jamison finds the potential for this among those sporadic environmental agents whom he describes as "hybrid agents," transgressing the affirmative and radical opposing poles of environmentalism. Potentially, education might provide platforms for such hybrid innovative knowledge making.

One objection to Eyerman and Jamison's approach is that it remains primarily inspired by analysis of environmental activist modes rooted in the 1960s and the following decades. Meanwhile, it is less appropriate to understand the forms of social movements, environmental activism, and knowledge production of the social media saturated societies of today in this manner. Alternative analytical lenses include those that draw on the comprehensive work of Manuel Castells on the network society. Castells suggests understanding social movements in terms of networks of agents, whether at local levels and/or virtually connected across spaces. In line with this network approach, the political scientist, Christopher Rootes, has studied the use and production of knowledge among environmental activists pointing to the relationship between local activism and transnational environmental organizations. Rootes (2007) shows how local activists draw on the discourses of transnational organizations and have learnt to act in ways that are more likely to confirm these discourses than dissolve concrete environmental conflicts. In a later study, he adds that environmental activists do not simply transfer knowledge from each other across the globe but interpret and adapt the knowledge to fit their own context.

In the USA, a focus on the analysis of collective behavior often seeks to conceptualize social movements as observable empirical phenomena developing according to their own inner logics, such as from spontaneous crowd actions to the formation of publics and social movements. While this approach has enabled both structural-functionalist and symbolic interactionist contributions, the focus on resource mobilization of recent times has challenged the automatic starting point of a collective behavior perspective, in focusing its analysis on organizations and not the individual. However, the collective behavior approach persists as part of US social psychology, when scholars employ in the study of environmental activism by focusing on the motives, attitudes, and behaviors of environmental activists and their groups. For example, Paul Stern et al. (1999) developed the value-belief-norm theory, based on empirical research documenting

how individuals not only accept the values of a particular environmental movement but also believe that these values are under threat. Their individual and collective actions are believed to help protect those values, and they experience an obligation for pro-movement action. Other studies have gone deeper into exploring how these values and beliefs are created and sustained. They point to the importance of "significant life experiences" derived from, for example, direct encounters with nature, peer role models, and community-based programs enabling collective action as crucial factors in fostering the values and beliefs that will later motivate environmental action and even activism.

Contributions from Environmental and Sustainability Education Research

As indicated in the introduction, the relationship between environmental activism and education/learning has also been addressed in relation to environmental and sustainability education (ESE). While there are only a few contributions within this field of research explicitly addressing environmental activism, several contributions to the development of ESE theory are of relevance to understanding the role of education in relation to environment activism. This issue has been extensively debated in ESE research, not least in response to the politics of the field and its boundaries but also the widespread practice of prescriptive and individual behavior modification-oriented educational practices of environmental NGOs. Four strands of response are identified, and each draws on generic theories of educational and learning into the development of ESE theory, in their own way. They also offer unique contributions to how the relationship between education and environmental activism is framed.

The first strand, often presented as "education for the environment," belongs to the tradition of critical pedagogy inspired by the work of Paulo Freire (among others) as well as by critical theory. Education is inevitably understood to be political. However, the departure point for critique is recognizing that the human interests and ideologies

underlying the dominant positivist and technical rational approach to education (such as via schooling), as well as to the environment, are hidden and hegemonic. In light of this, the political role of a critical-emancipative pedagogy is to scaffold learner's critical thinking on structures of powers and decision making and, in ESE, to "increase pupil's awareness of the moral and political decisions shaping the environment and to give them the knowledge, attitudes and skills that will help them to form their own judgements and to participate in environmental politics" (Huckle 1983). Hence, the role of ESE is to enable what critical theorist Oskar Negt has described as "exemplary learning" in order to promote critical environmental activism.

Partly inspired by the same critical theoretical tradition but also influenced by German "*bildung*" theory and John Dewey's work on democracy and education, Karsten Schnack and Bjarne Bruun Jensen developed an action competence approach to ESE. In contrast to the "education for the environment" approach, it abstains from demanding a starting point in the critical historical analysis of the educational system and the environmental issue. Rather, they state explicitly that the role of education is not to offer environmental solutions but, in an educationally constructivist way, to enable pupils to engage with human environmental conflicts and to learn by doing how to become active citizens in democratic societies (Schnack and Jensen 1997). One way to operationalize the approach is to apply the IVAC method, by which pupils learn from investigating an issue, visioning on problem-solving, acting as societal agents in their local community, and experiencing the effects of their attempts to promote changes. IVAC, it is suggested, integrates environmental activism as part of education although with the aim of socializing students to becoming "action competent" citizens rather than to necessarily solve a specific environmental problem.

While the two theoretical strands mentioned above are both oriented toward educating students in formal educational settings to become critical and engaged citizens in relation to environmental and sustainability issues, other strands are primarily oriented toward enabling environmental activism in nonformal educational spaces for social change and learning.

First, we must again recognize that social learning is a concept that has been used and understood in several ways. In ESE, it is partly inspired by Jürgen Habermas' theory of communicative action and related ideas of deliberative democracy in political science. In this respect, social learning is about providing spaces for dialogue between agents with different positions and attitudes on environmental or sustainability matters, whether it is with the ambition of gaining consensus or providing a platform for agonistic mutual clarification of disagreements (Wals 2007).

Another source of inspiration comes from the social learning tradition in public planning and organizational learning theory, such as that tracing its origins to the work of social psychologist Kurt Lewin and his successors, and which is also a living part of contemporary environmental and sustainability planning and management theory. The social learning space in this approach is not just a space for deliberative communication but oriented toward innovative co-thinking and problem-solving. Consequently, the social learning strand of ESE is about providing spaces in public planning, in communities, and at workplaces that enable participants to act together in relation to environmental and sustainability issues and to learn from each other. This may be through organized dialogues and workshops which are not only about routine problem-solving but, similar to Jamison's thoughts, enables innovative hybridity between multiple actors.

Closely related to social learning theory, the fourth strand addresses the request for fundamental sociocultural changes and paradigm shifts in worldviews, such as in debates about climate change and other global risk issues, by focusing on the necessity of transformative learning. While the potentials and challenges of transforming existing knowledge and wider mental structures are a well-known topic in psychology and learning theory, ESE scholars do not necessarily pay much attention to the individual oriented contribution on transformative learning from Mezirow and his successors. Rather, they tend to draw on a

range of other theoretical contributions emphasizing transformative learning as a relational and collective process. To illustrate, besides drawing inspiration from the capability approach and critical phenomenology, Heila Lotz-Sisitka et al. (2015) look to the post-Vygotskyan work of Yrjö Engeström on expansive learning. They pay special attention to the insight from expansive learning research of focusing on the identification of "germ cell" activities, that is, activities that embody a potential response to deep-seated societal contradictions, which can foster and lead to new forms of agency and to substantive social change at multiple levels. Drawing on the work of Michael Neocosmos, among others, Lotz-Sisitka et al. (2015) suggest a supplement to the concept of transformative learning with the concept of transgressive learning. This stresses that transformative processes can only "search for emancipatory inspiration in the exceeding of culture through the contradictions it itself engenders." Change-oriented and transformative ESE, in this sense, must highlight the importance of disruptive competences, which are developed in relational reflexive movements focused on the transformative elimination of absences in and through learning processes.

Where the other three strands of ESE contribute to the theoretical exploration of the relationship between environmental activism and learning/education by pointing to the importance of critical-political, action-experience, and social-dialogical qualities, the transformative-transgressive strand raises critical question of the relevance, potentials, and problems of environmental activism as collective efforts that promote transformative learning and change.

Environmental Activists as Educators and Learners

As shown above, both social movement and ESE scholars have pointed to public learning spaces as potential platforms for deliberations, innovative cocreation, and transformative learning. Recent ESE research supplements this by focusing more specifically on the role of environmental activists as educators and learners. In particular, environmental activists' learning can be understood as fundamentally tensioned given their feeling of a call to act and yet being overwhelmed and exhausted. Navigating this tension, besides learning new information and developing new skills, activism can disrupt and deepen one's sense of self-identity. Jonas Lysgaard (2016), for example, has explored the strong relationship between activism, learning, and processes of identity formation. Drawing on Slavoj Žižek and Jacques Lacan, he points to a double-layeredness which includes an exclusion of one's own "bad practices" from the narratives environmental activists tell about themselves. Similarly, Katrien Van Poeck and Joke Vandenabeele (2014) have shown how environmental activists take on a particular mode in their role of educators, through what Maarten Simons and Jan Masschelein have labeled, "teachers-as-masters." Of note is how this role is characterized by relations of care for an issue from which the teacher-as-master invites learners to respond and learn from, in the joint exploration of the issue. However, as Pierre Walter (2009) found, liberal, progressive, behavioristic, humanistic, and radical approaches to adult education all exist among environmental movements, be those of North America or beyond.

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Environmental Culture

Environmental Education

Environmental Education in Brazil

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Introduction

Environmental education (EE) in Brazil is part of the ecological turn in Western societies, led by ecological movements that emerged in the middle of the twentieth century. EE goes beyond the notion of the public sphere as an exclusively human common space, including the presence and the agency of the other nonhumans (e.g., the planet, the interspecies relations, biodiversity, forests, water, climate) in the common ground of life.

There are important differences between EE practices in relation to the understanding of the environmental issues. The research field of EE in Brazil has been developed under the influence of national policies and of global governance over the past decades. A recent proposal aiming to set new national goals for education and rebuild curriculum propositions has questioned the presence of EE as a compulsory discipline in Brazil. The debate raised between educators and policy makers has been marked by controversies motivated by political interests.

The environmental field is a concept based on the notion of "social field" defined by Bourdieu (1989) as a relatively autonomous space of social relationships historically situated. It produces a set of ethical values, identifying features of an ideal subject, and naturalizes certain ways of seeing and behaving that triggers the rules of the game established within the field. In this context, the environmental field can be defined by the extensive diversity of players and social interests that it engages.

The beginning of the EE field in Brazil dates back to the 1970s, during the earliest environmental movements and the emergence of organizations toward the conservation of nature. In relation to government actions addressing EE, there was the establishment of the National Secretary of Environment (Secretaria Nacional do Meio Ambiente – SEMA) in 1972. It was created as a response to the international debate raised in the United Nations Conference on the Human Environment, also known as the Stockholm Conference. However, it was only in the 1980s that EE was expanded through the increasing number of environmental organizations.

The countercultural environment of the 1960s and the revolutionary principles of the 1970s drove the emergence of the environmental field in the 1980s. The environmental movement was guided by a romantic and revolutionary utopia in the face of environmental issues and as a reaction to rationalist thought and technocracy that prevailed in the 1980s (Carvalho 2010). In Brazil, it

was only from the 1980s that educators started being called "environmental educators." Since then, an increasing number of national, and more recently Latin American, meetings have been organized indicating the construction of a social identity related to educational practices concerning the environment.

From the 1990s, partnerships between civil society (e.g., activists, intellectuals, and scientists) and the State were established in nongovernmental organizations (NGOs). This cultural environment sought to improve environmental practices, which was enhanced by the Conference of Environment and Development in 1992 in Rio de Janeiro (ECO-92). The "Earth Charter", created in the ECO-92, was completed in 2000, as a declaration of fundamental ethical principles for building a fair, sustainable, and peaceful global society.

During the preparatory process of the Civil Society Conference – Global Forum – concomitant to the ECO-92, the Brazilian Network of Environmental Education (Rede Brasileira de Educação Ambiental – REBEA) was established in Rio de Janeiro with members from all regions of Brazil. The REBEA encouraged the first Journey of Environmental Education, as well as the Environmental Education Treatise. This institution also organizes the Bi-annual Regional Forum and the National Forum of Environmental Education. Also, the "Treaty of Environmental Education for Sustainable Societies and Global Responsibility" was created during the International Day of Environmental Education, at the Global Forum. In the 2000s, educational changes following the National Curricular Parameters and Guidelines established in 1997 also contributed to the institutionalization of EE in Brazil. In the last two decades, the developments of the research field, as well as public policies for EE, have expanded in Brazil, as shown below.

EE Polices in Brazil

The EE institutionalization process through public policies begun in the 1980s and was consolidated in the 1990s. The proposal of a National Environmental Policy approved in 1981 included EE as a discipline in all educational levels. The importance of EE was strengthened with the Constitution of the Federative Republic of Brazil, enacted in 1988. This Federal Constitution included a specific chapter on environmental issues where the EE was established as a civil right. In 1994, the National Environmental Education Program (Programa Nacional de Educação Ambiental – ProNEA) was created, in line with the Treaty of Environmental Education for Sustainable Societies and Global Responsibility and in order to "ensure, at the educational level, the balanced integration of multiple dimensions of sustainability – environmental, social, ethical, cultural, economic, spatial and political." Then, the National Policy for Environmental Education (Plano Nacional de Educação Ambiental – PNEA) was implemented in 1999, with the understanding that environmental education is an essential and permanent component of national education and should be present in an articulated manner, at all levels and modalities of the educational process. Launched by the Brazilian Ministry of Education in 2001, the "Parameters in Action Program" included EE as a theme required for all levels of education. In 2002 the government launched the Brazilian Agenda 21, organized by the Commission for Sustainable Development Policies (Comissão para o Desenvolvimento Sustentável – CPDS), supported by the Ministry of Environment.

By the 2010s, there was already a well-structured legal framework to regulate the EE, and public policies for EE have been improved. In 2012, the National Council of Education (Conselho Nacional de Educação – CNE) elaborated the National Curriculum Guidelines for Environmental Education. In 2013, the Direct Money in School Program was launched by the Ministry of Education with a specific section aiming to support Sustainable Schools. This program aimed to offer financial support for the improvement of environmental sustainability in public schools. Under the motto of transition to sustainability, this program promotes Environmental and Quality of Life Committes, called

COM-VIDA, as a local key element in the transformation of these schools into sustainable educator's spaces. The COM-VIDA improve the participation of the whole school community seeking to promote social and environmental actions of sustainability as well as establishing relationships between the school community and its territory. In 2014, the National Education Plan was approved for the period of 2014–2024. The National Education Plan is a law, guaranteed by the Federal Constitution, which sets guidelines, goals, and strategies for the national education every 10 years. Currently, the National Education Plan unfolds the construction of the Common National Curricular Basis (CNCB). This aims to establish the essential knowledge and skills that Brazilian students should learn throughout their basic education. The Ministry of Education is the institution in charge for the development of the CNBC. It launched a first version document in 2014 in the form of public consultation for analysis and suggestions. Brazilian researchers and educators have spoken out in favor of including EE in the CNCB. In that document, sustainability is cited as an integrating theme, but there is no specific reference to EE.

The case of Brazil corroborates with a debate raised in Latin America in relation to concepts of sustainability and environmental education in the area of education. In Brazil and in most Latin American countries, the most suitable concept is environmental education and not education for sustainability or education for sustainable development (Sorrentino and Portugal 2016). This argument is shared by the majority of Latin American environmental educators who acknowledge that environmental education is the concept that bears the entire history and the social context in the area. Thus, even the United Nations Organization sought to disseminate the concept of education for sustainable development; environmental education was mostly kept in specialized literature, legislation, and everyday school and community actions in Brazil and Latin American.

Finally, despite the entire legal framework and the attempt of public policies in reiterating the importance and even the obligation to EE in all levels of education in schools, the EE practices are still punctual and discontinued. Two factors contribute to the difficulty of establishing EE in schools. First, the emphasis of these policies was on the crosscutting nature of EE. The legal framework prevented, for example, the creation of an EE curricular discipline in school, allowing it only in higher education and keeping EE as a peripheral issue in the formal curriculum system. A second factor is the complexity of laws established at the federal level to be implemented in the local realities by the State and local levels of governance, in a large country like Brazil.

A summary of the main public policies for EE in Brazil is presented in Table 1.

Environmental Education in Brazil, Table 1 Key public policies for EE in Brazil since the 1980s

1988: The Brazilian Constitution establishes that EE in all level of education is a citizenship right and a duty of the State
1989: Establishment of the National Environmental Fund to support EE projects
1992: Establishment of the Ministry of Environment
1994: Launch of the National Environmental Education Program in line with the Treaty of Environmental Education for Sustainable Societies and Global Responsibility
1997: Establishment of the National Curricular Parameters and Guidelines with environment as one of the crosscutting themes
1999: Implementation of the National Environmental Education Policy that determines the inclusion of EE at all educational levels
2001: Launch of the Curricular Parameters in Action Program that included EE as required for all levels of education
2002: Implementation of the National Environmental Education Policy by Decree 4.281/2002 and launch of the Brazilian Agenda 21
2012: Establishment of the National Curriculum Guidelines for Environmental Education
2013: Launch of Direct Money in School Program for Sustainable Schools
2014: Implementation of the National Sustainable Schools Program
2015–2016: Development of Common National Base Curriculum

Source: elaborated by the authors

The Research Field of EE in Brazil

Research in EE has increased in Brazil in recent decades. Scholarly works have been developed in different areas of knowledge, addressing the mainstreaming of environmental education as a research field in the country. Many researchers agree to address the problems environmental in the school curriculum, but point out that this discussion should place these problems in wider contexts like democracy, autonomy, quality of life, sustainability, relationships society and nature. Discussions on the theme also raise the need for a curricular subject of EE or to assert it transversally.

In the 2000s, the number of graduate programs in Brazil increased and included EE research. There has also been an increase of national scientific events, which include EE in their working groups (Carvalho and Farias 2011). These events include the participation of institutional research groups and specific journals for publication in the field.

In 2005, the Ministry of Education launched the survey "What do schools do when they say they offer environmental education?" in order to map out the presence and trends of EE in basic education. The survey conducted by Trajber and Mendonça (2006) revealed an increase in the number of schools that included EE between 2001 and 2004. It was established that the main methods applied in schools were projects, followed by Special Subjects and insertion of environmental issues in subjects. As for motivation to include EE, 59% of schools participating indicated that this was due to the initiative of teachers, and 35% said that it was a result of the implementation of the national curriculum standards.

In higher education, the University Network of EE Programs for Sustainable Societies (Rede Universitária de Programas de Educação Ambiental – RUPEA) was created in 2001, with the aim of expanding spaces of action and dialogue of university groups in the field of EE, as well as disclosing environmentalization experiences of higher education. A survey conducted by RUPEA between December 2004 and June 2005 indicated a controversy surrounding the interdisciplinary and transversal insertion of the environmental dimension in the curriculum, since many of the surveyed universities used a specific course in EE as a strategy.

Carvalho and Farias (2011) conducted a survey of the papers presented at the Meetings of the National Association of Graduate Studies and Research in Education (ANPEd), at Meetings of the National Association of Graduate Studies and Research in Environment and Society (ANPPAS), and at Meetings of Research in Environmental Education (EPEA) between 2001 and 2009, as representative of the research output in environmental education (EE) in the period. The outcome of the survey indicated that the most highlighted topics were the theoretical and methodological discussion on the fundamentals of EE in ANPEd, popular and community EE (e.g., EE focused on specific communities and social groups such as women, indigenous, black people descendants of slaves – the *quilombolas*) in ANPPAS, and EE in formal education in EPEA. Examining the themes of the three events, they found that the concern with EE in formal education was constant in all of them, representing 22% of the work. The authors emphasize that the presence of research production in EE in the researched events was a factor of legitimacy as a research area. It highlights the demand of researchers in EE as to the acknowledgment of this as a practice sustained by rigorous knowledge.

Another reference on the research field in Brazil is the Theses Bank of the Coordination for the Improvement of Higher Education Personnel (CAPES) and the Brazilian Digital Library of Theses and Dissertations of the Brazilian Institute for Information in Science and Technology (IBICT) where master's dissertations and doctoral theses conducted in Brazil in recent years are deposited. The search for environmental education in the IBICT shows a total of 3,763 theses and dissertations in this decade (between 2010 and 2016), being that 468 related to formal education. In the CAPES bank there are 1,221 publications in EE registered between 2011 and 2012, 736 related specifically to formal education. The majority of research comes from the field of education, with the remaining distributed in 79 other areas of knowledge. It can be observed that more than 60% of the records are related to formal education,

reinforcing the importance of this research focus in Brazil in recent years, which also reported Carvalho and Farias (2011).

Concepts of EE

Facing the controversy emerged from the environmental education, EE could be characterized generally as the production and reproduction of the belief in nature as "good" (i.e., "good" in the philosophical sense) that should be preserved above the simple interests of society. That is an eminently ethical question. This belief sustains the utopia of a symmetric relationship between the interests of society and natural processes. This utopia is challenged precisely because we still live inscribed in a paradigm of human/nature dichotomy. This reference is historically constituted, especially in relation to the legacy of modernity, which was founded on the constitution of a "great divide" between nature and culture (Latour 1994; Descola 2005). To maintain alive this great division, it becomes necessary a permanent effort of "purification," especially by normal science, in order to separate natural and cultural phenomena. However, this effort is not always successful, because in the plan of material life the permanent overlap between society and nature insists on creating difficulties for the modern project of objectivity that is intended to separate nature and culture into two distinct ontological zones. This epistemological crisis has led philosophers, anthropologists, and other thinkers to discuss this separation, claiming a symmetrical ontology (De Landa 2003) or a symmetrical alternative (Escobar 2007). It can be argued that the tension between nature and culture gives rise to a new modern epistemology. Corroborating with this idea, Steil and Carvalho (2014) proposed the concept of "ecological epistemologies" to identify the region of convergence of non-reductionist thinking that opens up new possibilities to operate within this tension, reordering the dualities without resorting to determinisms, whether culturist or biological. Ecological epistemologies oppose both the idea of a the dilution of culture in nature and an assimilation of nature by culture, considering that

the coproduction of human and natural history makes us all human and nonhuman, guests, and "co-citizens" of the same world.

Another perspective of EE is its justification as a pedagogical action necessary to confront the environmental crisis. One of the substantive arguments in this case relies on the criticism of the consequences of industrial capitalism. Again, the criticism refers to modernity and the rise of industry; intensive use of natural raw materials, based on the exploitation of labor; and the concentration of population and urbanization. The more intensified the processes of industrial society became in order to allow access to material goods in larger scales, the more risks are produced. An example is the contamination of food with pesticides, which is an "invisible" risk, even if it is a well-known fact. In this sense, Beck (2011) believes that nowadays the social production of wealth brings with it the social production of risks, which affects everyone regardless their social class. Although joining in the criticism of the legacy of modernity, authors take different positions in the field of actions. While Beck (2011) tends to seek a departure from the paradigm of modernity, presenting political and normative solutions for environmental issues, Latour (1994) and Descola (2005) choose a less radical approach. For Latour, the project of separation between humans and nature was never accomplished; therefore, "we have never been modern." Thus, by investing in the utopia of symmetry between humans and nature, we walk alongside an ethical evolution of thought, which considers nonhuman as political agents that interact with humans. Descola (2005) believes that the concern with the effects of human action on the environment points to a change in this modern thought. Furthering the debate, Ingold (2012) proposes the notion of meshwork to think about material culture and relations of communication, integration, and flows between "things." These "things" or "nonhumans", unlike "objects", are porous and fluid, laden with vital flows and integrated with the cycles and dynamics of life and the environment. In this sense, the author criticizes the theory of actor-network of Latour, Law, and Callon (Latour 1999), understanding that it still preserves a metaphysical division

between subjects and objects, since it gives objects a fetishized agency and disregards the unequal distribution of flows and senses along the network.

This way of understanding nature and non-humans from the concepts of flow, symmetry, continuity, and coevolution brings potentially new opportunities for environmental education practices in contrast to the predominantly normative practices in EE. Perhaps we could call this educational attitude as post-humanist, since it takes the human decentralization in the hierarchy of environmental determinations seriously. Thus, in this perspective, the recognition of the non-human is due to an aesthetic and ethically oriented attitude and is not exclusively cognitive or based on technical and instrumental rationality of what is recognized as "environmentally friendly" to the greater benefit of human life.

We must, however, consider that inside the general concept of environmental education, various particular notions of EE still remain, disputing the particular meaning of environment in a field of social conflicting interests and epistemologies. So, the diverse ways to understand EE bring to educational sphere the great division and the ways to overcome it. On the other hand, the different EEs pursue to influence on the ways society understand and make use of the nature, producing specific social environmental conditions in relationship between the universal and the particular, that is, between the society as a whole and the education in particular coproducing relationship.

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Environmental Education: A Field Under Siege

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Synonyms

Education for sustainability; Education for sustainable development; Environmental culture

Introduction

Facing the current consumption and production patterns associated to neoliberalism, environmental education (thereafter EE) is a controversial and contending field in different levels and modalities. This field is composed by a wide repertoire of pedagogical practices that pursue supposedly common objectives, but actually has qualitative different scopes. This repertoire fluctuates between approaches that question the (à la mode) civilizing trajectory and approaches that only tend to mitigate some of the problems caused by a certain way of life. In its more critical versions, it is a field of explicitly subversive social practices in confrontation with the establishment. Thus, even from its apparition, EE has fought for defining its own identity.

Due to these characteristics, EE has been directly attacked – even since the early 1990s – by a series of discourses that question its pertinence and validity by formulating proposals such as education for sustainable development (ESD), in tune with groups of interest and multinational corporations that intend to impose a pensée unique, that is, a single way of thinking (Ramonet 1995) in order to govern social and political life.

Background

EE originates hand in hand with the social preoccupation as a consequence of the enormous environmental deterioration that took place during the second half of twentieth century, as a consequence from industrialization expansion and urbanization in global scale, as well as demographic explosion. Some authors appeal to the main importance of environment in some previous philosophical and pedagogical traditions and currents, even if with heterogeneous arguments (i.e., Rousseau, Locke, Vives, Rabelais, Comenius, Pestalozzi) that may be considered as valuable contributions in order to understand the role played by the environment in the socialization processes of individuals, as well as in the understanding of the world and of the place we occupy in it. However, the acknowledging and recognition of the environment as a vital good to be preserved and ameliorated is a social construction than appeared only recently – in the decade of the 1960s – thanks to educational processes that seek to face socio-environmental problems and the complex causes that overdetermine them, by promoting certain values, attitudes, competences, and behaviors (Caride and Meira 2001).

The very notion of EE was expressed for the first time in a meeting of the World Conservation Union (IUCN) in 1948, even if its acceptance only took place some years later since it had to compete against some other concepts such as mesology education and education for conservation. It was at the United Nations Conference on the Human Environment (Stockholm 1972) where environmental education got its international patent when it was referred in Principle 19 of the Final Declaration as a desirable task in every population sector in order to induce a sense of responsibility towards the environment in all its human dimension. Recommendation 96 of the same Conference recognized EE as one of the fundamental elements to confront seriously world environmental crisis (cfr. Belgrade Charter 1975).

From then on, multiple meetings and organizations have contributed to develop a corpus of principles and criteria for action around the recognition of the environment as a complex entity in which elements and processes of diverse nature interact (i.e., biophysical, political, sociocultural, historical). Thus it requires holistic, cooperative, interdisciplinary, and transdisciplinary approaches for its adequate comprehension, as well as the assumption of a permanent education, innovative and critical, able to transform educational systems. This is a priority in order to develop necessary knowledge, abilities, values, and attitudes in students; to intervene individual and collectivelly; and to prepare citizens in the prevention and effective solution of problems.

As it usually occurs in the social field, EE has been transversalized by numerous discourses (Sauvé 2005). It has been so charismatic that it has generated enthusiasm in grassroots organizations that work on diverse topics. However, it has

not become a priority in public policies of many countries, since they have only taken them into account in instrumental terms to reach what they consider more transcendent goals. Perhaps this has occurred because it is a field that contends against the conventional curriculum as well as the economical interests that govern national policies.

In regard to school educative processes, the debate about environmental education typology as thought by Lucas (1979) was prevalent many years. Such typology was based in the differentiation between education *in*, *about*, and *for* environment, with the purpose of understanding the different meanings given to the concept. From our point of view, only the last one could be called EE. However, the most frequent treatment has been the incorporation of subjects and discrete topics in the curriculum closely linked to Science Education. Some other proposals that are more creative are based in critical arguments that provoke questioning the usual ideological and scientific basis of conventional knowledge, as well as the place occupied by environment. Among these innovative proposals, we can also find the strengthening of affective – and not only cognitive – processes in regard to environmental topics; an effort to open students' mind in order to hear usually excluded voices (i.e., feminism, indigenism) and, to try to construct new meanings for the educational act. Unfortunately these proposals have been hindered by refractory educational systems, sedimented schemes that are focused on transmissional disciplines and methods, as well as a group of teachers that are not well prepared for the necessary change. Summing up, EE tends to be reduced to a mere aspect of contents adapted to the traditional curriculum; its real potential as a learning strategy and process for social change is thus wasted.

Stages and Approaches

EE's trajectory can be summarized into four general historical stages. The first one is foundational and covers the end of the decade of the 1960s as well as the decade of the 1970s. Its main focus is the contribution of education for the conservation of natural environment, the solution of environmental problems, and the training of specialists in order to improve its management. Theoretical and institutional basis for EE are settled in this stage, thanks to a process headed by United Nations (UN). After UN Conference on the Human Environment (Stockholm 1972), UNESCO and UNEP were in charge of the International EE Programme (1975–1995) and organized a series of regional and international meetings and designed pedagogical inductive materials that were useful to establish a common ground in regard to objectives, instruments, and strategies of educative actions for contributing to solve environmental challenges. In this phase, guidelines resulting from Belgrade Charter (UNESCO-PNUMA 1975) and the Intergovernmental Conference on Environmental Education in Tbilisi (1977) are very relevant. The latter established that EE "should provide the necessary *knowledge* for interpretation of the complex phenomena that shape the environment, encourage those ethical, economic and aesthetic values which, constituting the basis of *self-discipline*, will further the development of *conduct* compatible with the preservation and improvement of the environment; it should also provide a wide range of *practical skills* required in the devising and application of *effective solutions to environmental problems*" (UNESCO 1978, p. 25; our italics).

The second stage covers the decade of the 1980s. It is a time for transition that coincides with the end of the Cold War and the consolidation of a new World Order characterized by a neoliberal ideological and economic hegemony. It underlies the need to create awareness in the entire population, and mainly in the youngest generations, about the environmental problems, as well as to train them in knowledge and habits that contribute to their solution. The research gives priority to positivist methodological and quasi-experimental approaches, with a great influence of conductive psychology. The 1987 UNESCO-UNEP International Conference on Environmental Education and Formation on Moscow established the basis for EE in the 1990s that identifies four priorities: "(i) the search for and implementation of effective models of

environmental education, training and information; (ii) general awareness of the causes and effects of environmental problems; (iii) general acceptance of the need for an integrated approach to solving these problems; (iv) training, at various levels, of the personnel needed for the rational management of the environment in view of achieving sustainable development at community, national, regional and worldwide levels" (UNESCO-UNEP 1988, p. 6). As underlying ideas of this approach we find the attribution of environmental problems to the supposedly irrational behavior both of individuals and social collectives. Also in 1987, *Our Common Future* (WCED 1987) was published. Best known as *Brundtland Report*, it inaugurated sustainable development as the articulating approach in the global environmental policy. The prescriptive irruption of this concept has been crucial for the evolution of EE during the last three decades.

Third stage beginnings can be situated with the UN Conference on Environment and Development (UNCED, Rio Summit 1992). The Stockholm approach which dated from 20 years ahead was given an important transformation at the Rio Summit. The concept "environmental education" disappeared from Rio Declaration and in the approved official documents, mainly "Chapter 36" of *Agenda 21*. The EE concept is also left behind due to the belief that it ignores the social and economic dimensions of environment and for having caused a naturalistic educational praxis and thus is replaced by Education for Sustainable Development (ESD). Simultaneous to Rio official Conference, the NGO's Global Forum was held (1992) giving place to the *Treaty on Environmental Education for Sustainable Societies and Global Responsibility*. It criticized EE's role in regard to a globalizing market to which operational logic inequity generation and biosphere deterioration are mutually linked, as direct effects of human pressure on natural resources and drains. Sustainable development, a key concept in the official discourse, is strongly questioned since it nurtures the belief that sustainability and equity as priority goals can be answered back without doubting about the hegemony of a mode of production, distribution, and

consumption that ignores the limits of the biosphere to satisfy with dignity the needs of every human community.

Rio Summit (1992) generated a bifurcation in the field of the educational responses to the environmental crisis that is still valid today. The Third International Conference on Environment and Society: Education and Public Awareness for Sustainability (Thesalonikki 1997, also known as Tbilisi+20) made an effort to stop this fracture by means of promoting the inclusive concept of EE for sustainability. However, the achieved consensus was ignored by the UN Commission on Sustainable Development (CDS), a high-level UN forum that examines and supervises the national, regional, and international progress of *Program 21*. Consistently, RIO+10 Summit on Johannesburg recommended to give impulse to education on sustainable development (ESD). In harmony with this line of thought, the UN General Assembly (2002) approved the establishment of the ESD Decade (2005–2014).

Nowadays we are in the fourth stage. It responds to the dialectics established between the aforementioned approaches. Such dialectics polarizes the field of educational response to environmental crisis between reformist positions that affirm that it is possible to find answers to such a crisis without really questioning the established development style, on the one hand. On the other, there are postdevelopmental positions that assume the impossibility of solving the challenge of environmental crisis without questioning the basic assumptions of the dominant economic order. The first ones are based on the belief that a development sustained on a finite world is possible, as well on the idea that poverty can be eliminated without questioning the models of production, distribution, and consumption that give access to high figures of welfare and richness in the affluent societies (most developed countries and the wealthy group of developing countries and emerging economies). The second ones challenge the ideological, political, and economic substratum that connects both faces of contemporary crisis: environmental and social. From this point of view, EE should focus on revealing the structural nature of the crisis and train citizenship

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in the necessary competences for a social and political action that is responsible and democratic. Challenging the link between education, growing, and development established in Rio+20 Summit (2012), in regard to the Green Economy concept, the necessity for a certain EE appears. This approach should be focused on the construction of social, economic, and cultural forms for decreasing, by preparing communities and societies for resilience in a future of scarcity (of fossil energy, food, drinking water, etc.) where it will be necessary to adapt human life to the changes that unavoidably will be produced as a result of the human habitat transformation as a consequence of climate change and other concurrent transformations of the biosphere. Diverging with ESD, EE confirms the necessity to politicize once and again the social praxis "to develop political-pedagogical itineraries depending on the unmet needs of populations and the sustainability requirements of specific territories, from each one's own cultures, local economies and a more just relationship with global markets, each one's own structures of employment, the carrying capacities of their ecosystems, allowing to build the human well-being in harmony with life and mother earth" (Rio+20 Educational Group 2012).

Conclusion

As it has been explained, a dominant discourse of EE now characterized by the discourse of ESD has prevailed. It marginalizes and makes other discourses and agents invisible, focused on a way of life that praises the Western urban way of life, the knowledge legitimized and institutionalized that tends to standardize the recipients of education and privileges individual instead of collective action, without really questioning neither the grounds of this hegemonic lifestyle nor its comfort zones. This discourse has colonized the discourses of multinational organizations that disseminate it as valid and safe recommendations. In this respect, A. Gough (1997) denounces, "The dominant discourses in environmental education threat the subject knowledge as homogenous and unitary because knowledge must be consistent

and coherent (163)... [then] English-speaking Western male-developed worldviews have dominated environmental education discussions to date" (xix).

As it can be observed in the new UN *Agenda 2030* for Sustainable Development, organized around 17 objectives approved in 2015 UN General Assembly (cfr. Objective 4.7), ESD continues being regarded as an education oriented towards promoting a change of attitudes and habits in coherence with the market economy functioning, which underlying logic is never questioned, based on ideas of growing as a development and richness premise in terms of going beyond poverty. This view ignores the fact that we live in a resource-finite world that cannot absorb the manifold impacts generated by human activities. This approach is openly aligned with the prevailing development style but is, however, disguised with an institutional and colonizing discourse that states it can place the world in the way towards an inclusive, sustainable, and resilient development.

Climate change is the most evident fact that demonstrates we have surpassed the biosphere limits with devastating consequences for every human society and, above all, for the most vulnerable ones. In this new scenario, some challenges faced by environmental educators, mainly the ones belonging to the most vulnerable countries, are to develop the necessary abilities and competences in order to promote actions and projects in respect to adaptation, disasters risk prevention, vulnerability, integral risk management, and strengthening social and community resilience.

Having said all this, an EE that puts criticism into practice is certainly skeptical about change possibilities at the margins of market economy system. This kind of EE, disconnected from such system, becomes postdevelopmental or postapocalyptical or postcolonial, emphasizing the political dimensions and, therefore, the urgent need to get involved with the new social movements with an alter-world character. In convergence with some intellectual and organizational waves such as the emerging degrowth movement, the movement of communities in transition and with the Andean living well (*sumaj kawsay*)

movement, makes evident this disconnection: educational practice is focused on community-life, people and social groups empowerment, the formation of citizenship, experiencing alternative lifestyles, as well new forms of production, distribution, and consume that actually take into account the biosphere limits and the need to equally distribute natural resources and environmental carrying, to promote democratic practices and collective decisions that are made in a more participative way.

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Environmental Learning

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Synonyms

Environment and education; Environment and pedagogy; Sustainability and education

Introduction

Learning about an environment can be achieved through a wide array of senses, contexts, and situations. This entry explores what environmental learning entails, how individuals make meaning in that learning, and key contexts, intersections, and challenges in environmental learning.

Environmental Learning

We start our explorations by noting that an individual is not always cognizant of the environment around them at any given point in time. Yet one's senses constantly take in data the body then processes, including on how an environment may become intelligible to them and others, and in what ways an environment may be "disturbed." This fundamental automatic processing mode suggests that what is well learned and encoded in long-term memory in relation to "the environment" demands attention only when something is different, changed, or unusual. Indeed, lack of critical attention to a familiar environment can lead to assumptions and held beliefs or knowledge that are not necessarily true.

Why does this situation arise, and what does it mean for environmental learning? First, understanding self and self's relationship to an environment is in great part *learned* through lived

experiences and possibly reflections on those, starting with formative affect and the processes of adaptation involving the whole person (Kolb and Kolb 2012). For Bronfenbrenner (1977), this can be understood through a series of intersecting frames. The present setting of an individual acts as the *microsystem* for learning, with other concurrent settings in the person's life suggestive of a *mesosystem*. Environmental learning amplifies the meaning of the setting as learning and setting are often intertwined and explicitly related. What Bronfonbrenner refers to as the *exosystem* is the formal and informal social structures around the individual, parallel to the notion of ecosystems of learning offered by Uden et al. (2007). Finally, the *macrosystem* refers to the overarching institutional patterns and values of the individual's culture, a major determinant in one's approach to human-environment interactions.

With this framework in mind, it is clear that regardless of one's understanding of an environment, we understand that humans learn to exist within a particular environment through normed behaviors, beliefs, and attitudes. For example, people may learn about how things work through the trials and tribulations of experience, but also how to acclimate to and shape perspectives about an environment through the interaction of their culture and dispositions. Thus, the capacity for reflexive mobility should also be recognized: it emerges through a human's sociocultural capability to weigh options, choose lifestyles, express identities, and compare alternative merits of places to live and visit.

An easy route into further considerations of such reflexive learning about environments, their conditions, and their affordances comes from recognizing that because the environment is always present, humans are prone to pay attention to what is outside their norm. For example, when traveling or vacationing, people may acclimatize or accommodate to the norm of the setting and scene around them. Taken together (as "acclimation"), an individual's sensorium aids their scanning of the environment for things that are different or out of place. Thus, an unexpected stimulus of a smell creates a sudden awareness of hunger, while an odd sound in the background may force a change in focus to what

had previously been ignored. In other words, we can recognize that a change in the usual is what triggers a sense of danger for the human brain in an environment (the automatic detection aspect in automatic/controlled process theory).

Natural Learning

However, while the natural function of being unaware to becoming aware of an environment can afford a complex system of ways to learn about a place, notions of reflexivity also flag that intentionality may be directed toward enabling a fuller sensorial engagement in a wide range of settings. These include experiencing a wide range of emotions in a natural environment – awe, fear, contentment, threat, happiness, connectedness, aloneness, and more. But is this all there is to how one comes to know about an environment and how an environment in turn shapes learning?

Many models of experiential modes in environmental learning can be readily simplified to three basic cognitive components: of data intake, processing, and retrieval. Data are taken in through the senses then processed through filters of prior experience to understand if the data are comparable to held understandings or expectations, challenge what we "know," or are simply beyond comprehension because the data have no filter. Then, a choice is made to act or not use the data to further expand understanding the phenomenon, reject the information, or let go of the information as not relevant. In such models, learning is typically understood as a spiraling, generative process of creating and transferring meaning for stimuli and events from a person's experience or understanding to other contexts (Wittrock 1974).

Yet because everyone has a distinct embodied, ensensed, and encultured way of taking in and processing information, the way one learns or makes meaning of information is unique. People see colors and things differently, taste differently, and have differing abilities of smell, touch, and hearing. This is not to suggest that there are no shared general processes or preferences for learning but that an individual's unique sensory filters ensure any common environmental experience is felt and interpreted differently. Such differences

increase over time as one's filters amplify data recall through complementary, cumulative life experiences and challenges of reconstructed and reproduced memories and culture which lead to how one "chunks" data into preexisting filters.

Coupled to this, the ways in which one becomes aware of and respond to the world and human learning in general presupposes a specific social nature and process by which we grow into the culture around us. Fundamentally learning is a social act involving relationships between people and the modes and tools of communication between them (Boud et al. 2009). Shared meanings are socially constructed and contextualized using cultural lenses, and environmental experiences are interpreted through socially constructed mores, norms, and ideals. Such understandings are transmitted through modeling, stories, language use, and culturally approved play.

Why does this matter for environmental learning? Environmental data do not always mesh with the culturally grounded narratives internalized in childhood, including those messages about what to do in an environment or about environmental issues that are subsequently reinforced or challenged during the experience of everyday life. Indeed, as Henry (2009) suggests, interpretations can be biased, incorrect, or impossible to falsify, but they are learned "in the sense that they are assimilated as truthful knowledge and impact consequent behavior. Relatedly, consider also the transmission of ideas or knowledge with no empirical component whatsoever. Values can be powerful drivers of human behavior and must similarly be learned, whether at church, around the dinner table, or on the street" (p. 133).

In school, children learn both facts and cultural interpretations of "environmental facts" without distinction. Equally, changes in the natural world are not necessarily comprehensible or easily reflected in how the world is sensed or interpreted in everyday life. Consider the concept of cultural amnesia related to the environment wherein an individual assumes that the quality of the environment in which they moved through childhood *is* the baseline of a good, healthy, or quality environment. Through the lifespan, what one learned at one point is held to be constant, regardless of changes in the environment. Thus, while taking in data is constant, making meaning of these data can be intentional, tacit, or dismissed.

Contexts for Environmental Learning

Environmental learning can also be understood through a fraying framework of postindustrial, Western orientations which tend to assume that learning is largely limited to the formal arena of schooling (Strauss 1984). One reason for this assumption is that since learning is commonly and culturally defined as what happens in schools, it is logical to assume that what is learned or obtained outside of school is discredited or dismissed as inferior. Yet learning does not stop during the course of one's life, even as interpreting the experience of life as learning may be dismissed, along with the understanding of learning as engagement with one's environment.

What distinguishes learning from knowing is critical here, particularly for appreciating the significance of the contexts and preferred experiences for environmental learning, such as via outdoor education. A child's earliest experience of the sky may change over time from questions of why is it blue (the social construct of color) to why the sky is crying (projecting what is known about self to another object) and then later, becoming enmeshed in a more complex understanding of gasses, water vapor, weather patterns, and climatic perturbations. Equally, knowledge can change temporal understandings of what one feels, experiences, and learns. Every new experience in one's life has the potential to change who the person is and reshape how the individual remembers what was in the past. As an adult, for example, it is impossible to recall a memory of outdoor play from childhood without casting that memory through the alterations of repeated telling and adding to or taking away details by others who offer alternate elements to the story.

This blurring of the quixotic, exceptional, and abstracted and the associated meaning-making typically plays out against the backdrop of people being continually exposed to their environments and others sharing these environments in everyday life. Educators seeking to focus on **everyday learning** and its critique highlight that the scope

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and textures of people's lived experiences are best understood through explorations of daily living and its parameters. For environmental learning, what may appear trivial or innocuous moments provide countless opportunities for interacting with and learning about the environment and environmental issues (Ardoin and Heimlich 2015).

This is because in daily interactions, people engage with natural and built environments, even as they find themselves talking about seemingly random things, memories, or events. But in every exchange, there is the potential for new data, insights, or connections made related to an environment. Whether at a farmers' market or a restaurant, taking a walk in a park or walking down a crowded sidewalk, one never knows when an idea or experience with the environment will add to understanding an issue, challenge something considered known, or delight, surprise, or affect one deeply. In such contexts, examples of learning possibilities might be insights into the carbon load for different foods, challenges of quantity, and quality of food production for restauranteurs, an awareness of invasive species locally or a sudden connection to understanding heat islands.

This suggests that **incidental learning** is a key to understanding environmental learning too. We learn from those things around us that contain messages shaped by others, even if this is unintentional. Television, news programs, radio talk shows, movies, magazines, social media – there are many sources from which individuals take information and add to their chunks and networks of understanding. A key challenge of incidental learning for educators is that people pay attention to sources of information with which they are most likely to agree, and in that way reinforce rather than challenge held understandings, beliefs, or attitudes. Thus everyday and incidental learning are often sources of knowledge or affect with no specific source for the individual – they become things that are just "known." Jarvis (2012), in writing about the inability of adults to realize present learning, notes that a great deal of such learning is "incident, pre-conscious and unplanned. In a sense we respond to events in a living manner – but then learning is about life" (p. 1).

Broadening this out, **informal** and **nonformal** learning and learning settings are often used to address how formal learning processes connect with incidental ones. In adult education, the nonformal and informal are usually defined by who sets the agenda and who determines the outcomes. In environmental education, informal typically refers to any out-of-school organized or structured learning. Other definitions suggest implicit, unintended, opportunistic, and unstructured learning and the absence of a teacher, or establishing what the knowledge structure or tradition is and who holds primary agency (the teacher?).

Although the literature continues to debate the definition and scope of informal environmental learning, there is relative agreement on the contexts in which such learning might occur. For environmental learning, the long list of informal learning settings includes nature centers, parks, science centers/museums, natural history museums, zoos, arboreta, aquariums, botanical gardens, forests, nature preserves, animal refuges, and more. These often hold the status of cultural institutions too, and as such, are not passive repositories but places of cognitive and affective change where, for example, visitors are challenged to sense and question the status quo or are introduced to alternative ways of perceiving the world.

Learning at the Intersections

For most individuals, environmental learning does not consciously fall into categories of formal, informal, nonformal, incidental, or everyday learning. Rather, what one knows, believes, and values about the environment is a product of living life. An interesting and confounding variable is that of the subjects/topics/issues that exist in the margins of disciplines or foci. Consider health and the environment. What is good for the environment is often good for public health and vice versa. In work on the conceptual landscape of environmental education, the concept of bridging has emerged as an important metaphor. Bridges are where individuals as learners or participants can enter an exchange from two differing perspectives. Public health could focus on an issue such as brownfield sites and related programming from

the perspective of reducing sickness, while environmental education could see the issue as related to cleaning the environment. An outdoor program for children could be intentionally driven by environmental learning, or it could be about getting children outdoors – a goal of the "children in nature" movement. Bridging suggests activity and learning may appear to be the same, but the intention is different depending on the desired outcome. Thus, some environmental learning may be intentional learning, but through a different discipline.

Learningscapes

As suggested above, environmental learning is unlikely to be a clean, linear process but rather a function of being a person, a complex construct in itself. People are constantly exposed to stimuli and data, and as learning is cumulative across experiences and time, individuals are challenged to be meaning-makers of these experiences across contexts. The concept of a *learningscape* offers a way to bring environmental learnings together through focusing on how a person moves through the world and has the potential for meaning-making across, among, and between myriad experiences of one's life, including in relation to the social roles through which the individual has those experiences.

Social role theory tells us the individual within the context will determine many of the behaviors one performs, including how one knows, thinks they know, feels and believes, values, and acts toward the environment. Equally, the role an individual plays at any given time greatly influences the lenses through which they interpret intake data. Consider the different experiences and outcomes for an individual when visiting a nature center with a small child as ward versus with friends out for a good time versus as a professional looking at the facility, programs, and interpretation. Thus we note, social role influences how an individual engages in institutions, structures, society, recreation, and what they take away cognitively, affectively, and skill wise from all their experiences, and then how they construct meaning, especially around understanding and action on environmental concerns. As Lave and Wenger (1991) emphasize, "learning is not merely situated in practice – as if it were some independently reifiable process that just happened to be located somewhere; learning is an integral part of generative social practice in the lived-in world" (p. 35).

Breaking Traditional Learning Constructs

What typically distinguishes schooling from other sites for environmental learning is that what is taught is not necessarily for the learner's interest or immediate use. Additionally, environmental education has historically been reliant on the "knowledge leads to attitude leads to behavior" or "attitude leads to knowledge leads to behavior" constructs of behavioral learning. Even though the myth that knowledge or affect alone can lead to behavior change has been repeatedly challenged, the field continues to be overly reliant on cognition-affect-performance models and meaning-making that privileges one over the other, as if causality rather than correlation had been established too (see Heimlich and Ardoin 2008).

In brief, an oversimplified focus on behavior mistakes focusing on behavioral outcomes rather than (1) the steps required to reach those outcomes or (2) readiness of the individual to move toward an action or a change in a behavioral routine. The goal of any behavior may be met through multiple pathways and by varying motivations, not the single action being promoted by the educator. For environmental learning to be integrated within a person's life, it is necessary to understand the grounds for that within the person.

To elaborate, the concept of conation highlights the importance of volition or the will/desire to do something. It merges what one knows, whether factual or held belief, with what one feels about something. Organizing environmental learning into cognitive, affective, and psychomotor outcomes is good for schooling and evaluation, but separating domains of learning does not resonate with how people naturally learn. Thoughts, beliefs, facts from assumed authorities, skills, values, passions, and so on are brought into learning, and their interactions determine what we take in and the meanings we make. Thus attention to the conative raises important questions for an environmental educator's focus

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on behavior – whether as habits of mind or habits of the body. Can their work incorporate and teach both, and the intersection of both, while is integration more a matter of rhetoric than reality?

Conclusion

Environmental learning is a natural, human process. We live in and with complex systems and we interact with those systems constantly. Rethinking *how* we learn and engage with and within our environments, and how we learn to make meaning of that engagement, can facilitate more authentic learning about the world around us. Schools, informal institutions, media, and others conveying messages about the environment have an obligation to help the receiver of the information make meaning of the content/message within the individual's life. Part of that meaning is through understanding how knowledge, affect, and behavior intersect to shape one's environmental behaviors and learning.

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Environmental Social Movements

▶ Environmental Activism

Environmental Subjectivity

▶ Environment and Pedagogy

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Epistemological Pluralism

▶ Field of Educational Administration and Its Coevolving Epistemologies

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▶ Placing Semiotics Within the Academy

Epistemology and Educational Administration

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Synonyms

Theory of knowledge and educational administration

Introduction

This entry explores in detail the ways in which epistemology shapes both the structure and the content of some of the major theories of educational administration. It does this by examining the epistemological assumptions that lie behind the kind of methodologies required to justify such theories or those epistemologies that query, on epistemological grounds, the relevance of a justificationist framework. Theories to be examined include traditional science approaches that assumed logical empiricism, traditional critical theory approaches that adopted transcendental forms of justification, humanistic approaches that saw values as central, perspectival Kuhnian approaches that advocated subjectivism, postmodern views based on a challenge to the notion of justification, and those that saw coherence as a model of justification. There are many more possible examples, but these well-known theories provide useful exemplars of a more generally applicable thesis.

The Theory Movement

In the early 1950s, in the USA, a concerted and well-funded effort (by the Kellogg Foundation) was made to upgrade research in educational administration with the purpose of improving schools. The aim was to make research more scientific. The model of "scientific" was one borrowed from logical empiricism, in particular,

a version of Herbert Feigl's view that he had taken from the natural sciences and had adapted for social science. And there was a major exemplar of these ideas in the field already: Herbert Simon's book *Administrative Behavior*, first published in 1945. The model had three distinctive features:

1. A theory was to be seen as a hypothetico-deductive structure. Roughly speaking, a theory's most general claims are at the top of the structure with less general claims appearing further down the structure. Phenomena could then be explained by showing that they could be subsumed under relevant claims in the theory.
2. Justification of a theory's claims proceeds by a process of empirical testing. That is, the theory implies particular empirical outcomes. If these are observed, the theory is confirmed. If contrary outcomes are observed, the theory is disconfirmed. Justification is a matter of accumulating many confirmations and no disconfirmations.
3. Operational definitions of all theoretical concepts are required. This amounts to being able to give empirical measurement procedures for these concepts.

The nature of these claims is driven largely by epistemology. On the matter of operational definitions, it is a question of how do you know what the terms mean, with meaning being given by some empirical measurement procedure. Empirical testing lies at the core of justification. And recasting a theory as a hypothetico-deductive structure is done precisely to facilitate testing.

There are two significant consequences for the content of theories in educational administration. The first is the total exclusion of ethics that arises from belief in a sharp distinction between facts and values. A science of administration is one that deals in knowledge about the way the world is, that is, what can be observed or known through observation. Claims about what ought to be the case, in the sense of a moral "ought," lie outside the domain of science. This ethics-excluding partition continues even to the present day where perhaps the most influential textbook in this

tradition, Hoy and Miskel's *Educational Administration: Theory, Research, and Practice* (2013), now into its ninth edition, omits ethics. You would think that this would be perceived as a serious omission because administrators are constantly dealing with the question "What ought I do?" In response, it is tempting to push the answer off into outside goals, construing means as the province of scientific administrative theory. However, even among alternative means, they may not be equivalent on moral grounds.

A second significant consequence is the focus on administrator behaviors, due to the fact that these are observable. In social science, it is hard to make this work even for the simplest behaviors. Consider, for example, Skinner's attempt to give a behaviorist account of language learning. He begins with a reductio argument as follows. Suppose we have inputs in the form of stimuli that causally impinge on a black box (the mind) which in turn causally impinges on output behaviors. But if there are any significant relations between inputs and outputs, we can methodologically just dispense with the black box assumption and theorize in terms of the linked observable inputs and outputs.

To this argument, Chomsky raised two key objections. The first concerned the definition of a stimulus. How is a stimulus to be distinguished from the many other features of the environment in which a person is causally enmeshed? The required answer is that a stimulus is something that a person attends to. The problem is that the notion of attending to is a mental property or at least something that resides inside the black box. The second objection queries the possibility of establishing systematic links between stimuli and behaviors. For example, how would you ever know that seeing a Renoir on an art gallery wall is more likely to produce the spoken behavior "That's a Renoir" as opposed to "That matches the carpet" or indeed any arbitrary number of other spoken responses.

These kinds of criticisms helped usher in the cognitive revolution that began in the early 1960s. Nevertheless, social science requires more. Consider the behavior of quickly raising one's arm with added descriptors specifying rotation, length,

angle from the vertical, angle from a person's front, and so on. None of this is sufficient to meet the explanatory requirements of social science which operates on more fine-grained distinctions. Is the person swatting at a mosquito, bidding at an auction, signaling to a distant acquaintance, or suffering from a tic?

Subjectivism

While traditional science of educational administration continued to flourish, largely by ignoring some of the more drastic strictures its logical empiricist epistemology imposed, from the mid-1970s, more systematic alternatives began to be developed drawing on different epistemological positions. The first of these to gain traction as a major challenge was that proposed by Thomas Greenfield. In his classic paper – (Greenfield 1975) – his initial target was the purported objectivity of theories in natural science. His familiarity with the work of Kuhn provided the relevant philosophical ammunition. His various arguments were pitched at establishing the conclusion that empirical evidence was never sufficient for rationally choosing among competing scientific theories, especially those that are paradigmatic. Rather, it is those theories that determine what counts as appropriate empirical evidence. Scattered throughout his paper are three characteristic arguments. First, the fact/theory distinction blurs because observations are always theory laden. Second, theories are always underdetermined by empirical evidence. That is, it is always possible to draw an arbitrary number of different curves through a finite number of data points. Finally, test situations are always complex making it often hard to determine which particular claims or set of claims is being disconfirmed by observations. For Greenfield, if all the evidence there is for a theory is empirical evidence and if empirical evidence is never sufficient for rational theory choice, then what counts is a matter of human subjectivity.

Greenfield then extends this idea to social science but with a further consideration. Because the relevance of human subjectivity is essential for interpreting and understanding the actions of

others, the entire apparatus of natural science explanation and justification is entirely inappropriate in social science. Organizations are not realities out there to be fitted into a hypothetico-deductive framework of empirical lawlike generalizations being subject to testability conditions, a view that still manifests within the systems-theoretic approach to theory building and testing. Rather they are human inventions, the result of collective interpretations and interpretations of others' interpretations. There is no quest for lawlike generalizations. Rather the quest is for sets of meanings that people use to make sense of their different worlds. If there is a switch in these meanings, then there is a corresponding change in organizational reality (Greenfield 1975, p. 7). Greenfield's arguments ushered in the notion that traditional science of administration was just one possible paradigm for understanding the social world. There were others, including Greenfields subjectivism.

Ethics and Educational Administration

Another approach provided a way to incorporate values into administrative theory. This was first pioneered in the field by Christopher Hodgkinson in his *Towards a Philosophy of Administration* (1978). In this work, Hodgkinson accepted fully the claim that there is a sharp separation between fact and value. However, what followed next for Hodgkinson was a complete reversal of the argument that traditional science of administration advocates had used to exclude ethics from educational administration. For Hodgkinson drew attention to the many ethical issues that arise in administrative life, including both the setting of organizational goals and the making of choices about how to achieve them. Rather than ethics being peripheral to organizational life, he argued that it was central. The result was both simple and profound in its consequences. If science excludes values and if values are central for administration, then educational administration is not a science at all. Rather, it is a humanism.

Hodgkinson developed an account of organizations based on his epistemology of values. He posited four types of values that formed a hierarchy. At the bottom were type III values whose justification depended just on human affect, what people felt. At the next level were Type IIb values, those justified by appeal to the collective will or a shared solidarity. At the next level, Type IIa values were justified by appeals to rationality. This category could include both utilitarian arguments, including the more arcane methods of utility maximization, and Kantian, or deontological, arguments based on transcendental deductions of what norms are presupposed for ethics to be possible. At the top of the hierarchy of values were those classified as Type I. Called "transrational," their epistemology took the form of a superior kind of intuition. Although not justified by an explicitly Platonic appeal to the abstract forms, the affinity with Plato's ideas is clearly there.

This account of values was much more than just a taxonomy of the kinds of ethical decision-making that might exist in organizational life. It was also presumed to offer a structure for understanding organizations based on the kinds of ethical decision-making that existed at each level of organizational life. Thus, at the bottom of the organizational hierarchy could be found the rank and file whose characteristic decisions were Type III. At the next level, a more collective dynamic prevailed. The next level was where rationality dominated, the province of management. And at the top was where the big decisions on organizational purpose and means for achieving it could be found, administrators exercising Type I judgments.

Critical Theory

A further illustration of the role of epistemology from the history of the field can be found in the influence of critical theory, the most systematic expression of which can be found in William Foster's *Paradigms and Promises* (1988). The epistemology derives from the early work of Habermas, particularly his *Knowledge and Human Interests* (1972). For critical theorists in this incarnation, the principal weakness of traditional science of educational administration lay in

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its assumption that there was only one type of knowledge, namely, scientific knowledge. Habermas, employing Kantian style arguments, identified three fundamental human interests: an interest in manipulating and controlling the world, an interest in communication, and an interest in freedom. More explicitly, scientific knowledge, in presupposing the requirement of manipulation and control, when applied to people, places a premium on treating people as means rather than ends in themselves. Hermeneutical knowledge has, as a presupposition for communication, an ideal speech situation where barriers to communication such as power and inequality are to be resisted and removed. Finally, emancipatory knowledge presupposes social and political arrangements that support the promotion of human freedom.

When this view of knowledge is applied to theories in educational administration, the structure of theories is affected by needing to accommodate these types of knowledge, and the content of such theories is transformed. Thus, critical theory implies accounts of administration that include an ethics of respect for persons, for treating persons as intrinsically of value rather than their value residing merely in their contribution to the organization. It stresses more democratic forms of organizational practice and participation, but in the cause of communication and in honoring the freedoms associated with democratic practice. Moreover, it counsels a wider sense of organizational responsibility with goals being set not just under the constraints of organizational functioning, but with an ethical constraint for promoting the betterment of society.

Postmodernism

A fifth, more recent view reflects postmodern influences on educational administration. There are two main varieties of this. The first is a sociological thesis, best described using the term postmodernity, where a society is fragmented, boundaries are unclear, geographies are de-centered, controls are less prevalent, and the present is a possibility of chaos. This is an empirical thesis about the nature of society. The second variety is primarily a philosophical thesis, with a central component being a view of epistemology. Again there are differences within this variety. The one to be dealt with here derives from Richard Rorty's book *Philosophy and the Mirror of Nature* (1980). The book defends three characteristic theses. The first is that there are no foundations to knowledge. This anti-foundationalism is taken to compromise the task of justifying knowledge, to render the task otiose. The second is anti-essentialism, a gesture toward the fluidity of ontological boundaries. It comes with the notion that many of our familiar categories to do with gender, handicap, race, and class are social constructs that are malleable. The third is anti-representationalism, the notion that our theories are not representations of the world and that they do not mirror nature.

The earliest systematic expression of these ideas in educational administration can be found in Spencer Maxcy's edited volume *Postmodern School Leadership* (1994). Because of overlapping skeptical epistemologies, there are some similarities between Greenfield's subjectivism and philosophical postmodernism. However, while Greenfield was content to leave open the kinds of nonempirical factors that might influence theory choice, a number of postmodern writers in the field have settled on the importance of aesthetics. The most recent book-length example of this is Fenwick English and Lisa Ehrich's work *Leading Beautifully: Educational Leadership as Connoisseurship* (2016). What needs to be looked at closely is whether aesthetic criteria for leadership have an implicit epistemological function. That is, can these criteria be used to make good decisions is the same way that inferences from data can be helpful. There are ways in which the epistemology can be implied without being able to be specified. One classical example is Aristotle's practical wisdom – unable to be specified in rules but visible in wise outcomes. Another is Hodgkinson's account of leadership as a moral art. On his view, something that is an art cannot be specified by a procedure or an algorithm. And so it may be with leading beautifully.

Naturalistic Coherentism

The final approach to be considered is that developed over a 25-year period through a series of books and many papers by Colin Evers and Gabriele Lakomski. (For a recent overview, see Evers and Lakomski 2015.) Their epistemology is known as naturalistic coherentism. The coherentism is based on the notion that there is more to justification than empirical adequacy. In addition to empirical adequacy, what else is important is that theories need to be consistent, they need to be comprehensive, the various parts need to cohere, and there is value in simplicity which tells against the addition of ad hoc assumptions to bring the theory into line with empirical evidence. This combination of epistemic virtues makes for a coherentist account of justification. Although this epistemology is not foundationalist and leaves open the question of essentialism, it is representationalist. That is, it claims that our best theories are like maps that help get us around our social and natural worlds at better than chance or coin tossing. The naturalism is a tilt against so-called armchair epistemology. It is the requirement that the epistemology is sanctioned by our best natural science. Furthermore, a science of administration is also required to cohere with natural science. In developing accounts of decision-making, expertise, leadership, the role of emotion, and practical reasoning, Evers and Lakomski's naturalism draws on work in cognitive neuroscience to account for the dynamics of knowledge acquisition and change and of knowledge representation. On this view, the best administrative theory would be one that accounts for administrative phenomena in the most coherent way. But note a caveat. Administrative phenomena occur in material contexts. So, for example, the most appropriate theory of leadership in one school can be entirely inappropriate for another school. This result leads to an emphasis on theory building. Because a lot of knowledge in social science is both provisional and context dependent, this approach sees building an account of leadership as a trajectory of trying out theories that are believed to be useful, applying them and then if they are unsuccessful, using the coherentist epistemology to make improvements for the next iteration of application. The result is a process view of administrative knowledge rather than a content view. In terms of what the epistemology allows in a theory, its holism permits both ethics and considerations of human subjectivity to be part of the resulting web of belief. And in the matter of structure, a theory is best seen as a web, as Quine imagined, with the most central, least revisable parts at the center and the most easily revised parts toward the periphery.

Conclusion

Although the above five examples provide clear evidence of the role of epistemologies in shaping both the content and the structure of theories in educational administration, it is arguable that this is something that applies to many other approaches to educational administration. This will be evident from the various contributions to the encyclopedia's section on educational administration.

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Equality

Equity

Ethical Contingency

Ethical Inquiry

Ethical Orientation

Ethical Relation

Ethics

Ethics and Education

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Synonyms

Authoritarianism; Deontology; Ethical contingency; Ethics of care; Professional judgement in ethics; Utilitarianism

Introduction

Ethics are concerned with choices about interhuman relationships (Barrow 1982), but educators situated in a multicultural global mass media cannot avoid confrontation with the dominant bourgeois patriarchal Western values which they learnt as unconditional truths of logic or fact. Actions based on either deontology or utilitarianism remain rationally indeterminate, requiring a judgement involving the context in which the rational choice must be made. This article presents a complex triad of ethics to balance competing ideologies of ethics.

Educators in particular are exhorted to make space for previously marginalized voices to recognize values other than their own. But to what extent can they question the value of their values? Inability to move outside one's contingent practices and assumptions can prevent teachers from recognizing oppressive practices, especially their own. Yet recognizing relativism can lead to a terror of exercising independent judgement, so that one takes refuge in the rules of others, the dominant local conventions. This professional

implementation of the conventional rules and sanctions of the system can ironically be unethical, leading to impositions of power which can be seen as unfair if routinely applied. Authoritarian control lies directly counter to a view of ethics as professional powersharing, though it is compatible with and often concealed within an economic rationalist framework of increased and controlled efficiency. Any systematic ethical theory runs the risk of being labeled modernist, dogmatic, or insensitive to other cultures. The Kantian shift to idealist categorical imperatives or an Aristotelian appeal to ends which justify means seem to militate against simplistic appeal to logic or fact. Professional ethics requires ongoing judgements, interpretations of codes of conduct.

Where will the educator locate ethical codes of conduct or guiding rules for conduct? In ethics, we build up a rational frame composed of concepts such as good, honesty, justice, blame, and bullying, which help us to see connections between certain types of action and practices and for which often tacitly we generalize rules for good and bad behavior through social agreements. These concepts may well be transcendentally necessary before we can get any notion of a social being off the ground. As Rawls (1989) noted while we can agree about concepts, the conceptions which link these to our daily practices are more culturally contingent. What makes ethics more than a matter of mere "intuition" or haphazard choice is that it is connected by these common concepts, which means that we can talk about our different conceptions by using a vocabulary of shared concepts, showing by examples what we mean by our conceptions.

Ethical explanations and theory are traditionally polarized: the Aristotelians versus the Platonists, the utilitarians versus the Kantians, or the consequentialists versus the deontologists (Stout 1988; Strike and Ternasky 1993; Frankena 1963). In a postmodern era, it is less useful to treat them as oppositional theories than as frameworks which simply identify different aspects of morality.

Wren (1993, p. 81) identified two major forms of morality: the deontic and ethical. The central features of the deontic group, he says, are keyed to the notion of right action (relatively impersonal features such as justice, judgements, criteria of fairness, duties, rights, claims, and so on), and it therefore includes juridical, proceduralist, and intuitionist conceptions. The teacher who identifies with this will probably place more emphasis on the development of students as good citizens with a sense of civic duty. The ethical group (teleological, self-actualizing, and romantic) is so-called because its central features are keyed to the various personal notions of the good (such as happiness, self-actualization, personal excellence, authenticity, autonomy, and other forms of human flourishing) but will probably be favored by the teacher who seeks students' personal happiness.

To separate out the ethical from the deontic, private from public, intra-moral from extra-moral, however temporarily, may distract us from seeing their interdependence. An autonomous or self-actualized person must have a personal commitment to public duty for it to be meaningful for him.

Many philosophers now present tripartite theories of philosophy which lend themselves more easily to a conversation about differences rather than a conflict between them. Beck (1994) names caring as the central concern of ethics, but says it is justified by both deontological and consequentialist arguments. Strike and Ternasky (1993, pp. 13–66) distinguish an Aristotelian perspective, a liberal democratic tradition, and a feminist perspective. Nozick (1990, pp. 151–156) identifies three basic stances to value questions – the egoistic, the absolute, and the relational which connects the first two stances.

A triadic taxonomy is proposed (Haynes 1998) in the form of an evolving spiral of judgement in which there is no prior value or end point.

1. **consistency**: a "subjective" aspect in which one internalizes practice to shape intentional actions. Here ethical acts are deliberate, chosen, shaped, and made justifiable by the personal coherence of internalized rules and concepts, meaning and values,

2. **consequences**: the "objective" aspect of ethics which sees practice as externalized individual

or social behavior, in terms of its known and anticipated causes and consequences, both immediate and long term and

3. **care**: in which the carer attends to the cared-for in a special mode of nonselective attention or engrossment which extends outward across a broad web of relations. It is a holistic and responsive making of reciprocal connections in order to help others in a special act of receptivity.

Kohlberg outlined a neo-Kantian hierarchy based on a Piagetian notion of thought as interiorized action, leading from concrete to formal operations, from egocentrism to rational autonomy. He believed that moral judgement and moral behavior were conceptually as well as causally reciprocal, two moments of a single personal unity and that moral unity was the cognitive career of an individual subject or self. Each individual moves through reflection on disturbances to equilibrium from an egocentric and concrete level to a universal and abstract level of reason, through the three distinct levels of moral development (preconventional, conventional, and post-conventional). This is consistent with a constructivist epistemology, in which an individual builds language systems from their engagement with a physical reality, ignoring political and social influences.

A similar rational developmental model underpins most national curricula, requiring students to abstract from the particularity of their circumstances to the universal principles apparently underlying each subject area. The principle of respect for persons defines the moral sphere. The more consistent one's actions are with one's self-constructed principles, the more ethical one is. The principle of respect for persons requires the subject to consider all persons as morally equal, which is also a matter of consistency. It means that you must do unto others as you would they should do unto you, a notion referred to by Hare as universalizability.

Universalizability means that whenever one uses the term "ought," one must be ready to apply it to all similar situations, for all persons. On the rational consistency view, lying is always

wrong, whatever the circumstances. Whatever one person is morally obliged to do in a particular situation, all others in comparable situations must also be obligated to do. Generalizing from one experience to the other is the most usual way we make meaning, and we encourage students to do it in schools. It becomes dangerous if the conceptions and generalizations so formed become rigid and closed on the basis of past experiences, for instance in racial stereotyping. The strength of the rational consistency model is at the same time its weakness because its categories of ethical concepts are abstracted and therefore distant from the complexities of real and experienced situations.

There are problems with the efficacy of any system which becomes logically consistent without contradictions, because, as Gödel pointed out in his attack on formal logical systems, such systems become self-justifying and circular. If ethics were only a set of coherent conceptions or principles, we would not know what to do when those principles came into conflict. Neo-Kantians (like O'Neill 1996) cannot evade this problem by building a more complicated system of qualifiers into the system, or by ranking the rules in some hierarchical and abstracting structure to resolve conflicts between them, for that only pushes the resolution of issues back to a more abstract set of ideals.

The consequences approach therefore places its emphasis on what can be observed and agreed upon intersubjectively, and like utilitarianism, it focuses on the scientific or measurable aspects of morality. It is also a teleological view – that is, it focuses on goals rather than internalized rules. Actions are assessed by the extent to which they reach those goals. It looks at cause and effect rather than at principles and outcomes rather than intentions.

Many educators adopt a consequentialist or utilitarian position for most of their decisions. They attempt to provide a felicific calculus for each action, that is, draw up all the possible beneficial consequences, weigh them against the possible harmful consequences, and carry out that action which promotes the greatest happiness or well-being for the greatest number of people. The

position is called "objective" because it promotes the belief that such a calculus can be agreed upon, that different people can see the consequences of any action as if they were real in the world, and that the units that are being measured are really units.

A consequentialist theory of ethics is not inconsistent in its movement up a hierarchy with Kohlbergian ethics because from the subjective point of view, a young child starts with an immediate egocentric and concrete concern for pleasure and pain as immediate benefits and costs and builds up from that calculus to a wider awareness of short term and long-term consequences to a concern for abstract consequences. As a person internalizes the rules that they construct both through concrete operations and the acquisition of social practices through language, the physical consequences of their actions become less and less easy to distinguish from the linguistic and logical structures of knowledge and belief. What counts as a consequence becomes more and more abstract as it is forced to cover a wider and more complex set of actual and possible circumstances.

The consequential point of view by itself is inadequate as a foundation for ethical behavior, if it presumes that the greatest good for the greatest possible number could be discovered independently of any conceptual structure or idealistic structure. Such a structure is necessary to provide the criteria for good or bad consequences. As Kant said, percepts without concepts are empty; concepts without percepts are blind. Janus-like, they are not mutually exclusive, but different aspects of the same actions.

A hierarchical dualistic model which combines consequentialism and a move towards logical consistency is inadequate because it still basically assumes a modernist model of the moral subject. One can only arrive at the "truth" of maximizing benefits or of universalizability within a frame of transcendental arguments which presume categorical imperatives, moral laws which cannot be disobeyed, or facts which exist outside a web of beliefs. We are confronted with the paradox of polyglot universalism, treated consistently by O'Neill (1996) or consequentially by Nussbaum (1997).

Although universalizability principles transcend cultural values, we cannot deduce from these concepts which practices or conceptions are to count as most worthwhile. Simply thinking within a coherent system of abstract ideas will not help us settle intercultural disputes. The two great comprehensive ethical systems – Kant's ethics of duty and utilitarianism – put enormous emphasis on human rationality. In a complex world, competing coherent systems will require ongoing negotiation for the competing merits of different conceptions of ethics which could each be consistent with their own abstracted concepts but are incompatible with one another (Lyotard 1988). Reason alone will not show the fly out of the flybottle.

Heidegger (1927) posited that Sorge or Care as an ontological attribute is a prerequisite to reasonableness. Ethical sensitivity seems closely related to care. Care, argued Gilligan (1982), is not a matter of logic or justice, but more a matter of caring within a circle or web of responsibility. The emphasis on contextuality and narrative moves the care frame outside an objectively measured one or a logically constructed one and is centered in the personal response. To care is to inhabit a Habermasian lifeworld, to be aware rather than reflective (Habermas 1990, p. 207).

Gilligan's conception of morality as concerned with the activity of care centers moral development round the understanding of responsibility and relationships, just as the conception of morality as fairness ties moral development to the understanding of rights and rules (Hekman 1995).

Because an ethic of care focuses on response to the situation it is more grounded in the perceptions of situations than the abstracted reflection and measurement of them required by either the consistency or consequences model. The strengths of the consistency and consequences approaches, namely that they invoke important forms of cognitive accountability, are at the same time its weakness in placing too much emphasis on rationality and too little on the immediate response, a way of seeing which is personal. While caring uses distinction as an instrument it does not depend upon it for its meaning.

E

What do we mean when we advise someone to take care? How is it related to the more sentimental notion of caring? The thesaurus indicates that care is related to anxiety, responsibility, being anxious, and being careful. This is a common thread throughout many of those who write about the need for an ethical community to be a caring one (Noddings 1984; Nussbaum 1996).

The ethic of responsibility is needed for ethical practices to be meaningful, because it is a holistic response rather than a distanced or analytic one. This ethic of responsibility or care picks up the etymology of responsibility as responding (Buber 1961), that is, it is one in which one responds to the concerns of others, not out of a sense of duty but out of a feeling of responsive mutuality (Benhabib 1992). The apparent gender differences are more illusory than useful and the ethic of care or responding to the world situationally and holistically is as much an agent of conceptual development as it is a different manner of conceptualizing morally.

The ethic of care is not superior to the consistency or consequences aspects – they are all necessary components of a dialogical and relational process of moral growth.

Both care and consistency are marks of personal integrity and commitment, and in that respect opposed to consequences which focusses on what happens regardless of the way any individual perceives it. But in taking care as well as caring, one must pay attention to the Other while consistency remains a matter of one's internalized conceptual and logical schemata. From another perspective, thinking about consequences and internal consistency are both cerebral and analytic, the knowledge of cause and effect that can allow us to consider consequences often being at least proto-theoretical. In that respect care, holistic, and sensed rather than intellectual is oppositional to consistency and consequences.

To illustrate their interdependence, I (Haynes 1998) borrow a metaphor from Lacan (1975, p. 112), that of the Borromean knots, interlocking rings such that when any one of the rings is cut the entire interlocking system falls apart. What the Borromean knot particularly emphasizes is the fall from privilege of any one of the rings that constitute the knot. Neither consistency, consequences, nor care provides adequate foundation for ethical decisions, but jointly they constitute the base for ethical decision-making.

To remove ethics from a logical or factual foundation does not make it anarchic or chaotic (Squires 1993). Ethics is founded on reasonableness and an educator will be ethical to the extent to which he or she gives serious consideration to these three aspects of any situation:

- What are the consequences, both short and long term for me and others, and do the benefits of any possible action outweigh the harmful effects?
- Are all the agents in this situation being consistent with their own past actions and beliefs? That is, are they acting according to an ethical principle/ethical principles which they would be willing to apply in any other similar situation? Are they doing to others as they would they should do unto them?
- Are they responding to the needs of others as human beings? Do they care about other people in this particular situation as persons with feelings like themselves? Are they attentive to others?

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Ethics and Significance: Insights from Welby for Meaningful Education

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Synonyms

Child development; Edusemiotics; Ethics; Experience; Language; Meaning; Practice; Semioethics; Semiotics; Significance; Significs; Translation; Values

Introduction

This entry focuses on Victoria Lady Welby's (1837–1912) theory of meaning – which she denominated *significs* – and addresses her contribution to education as, specifically, the problematic of educating for values. To bring Welby's legacy into edusemiotics is timely, especially considering that her work does not yet enjoy the notoriety it deserves. Yet her conceptualizations demonstrate the connection of her unorthodox theory of meaning to the philosophy of education today – a key concern in both *edusemiotics* (Stables and Semetsky 2015) and *semioethics* (Petrilli and Ponzio 2010), whence ethics is informed by signs, their interpretation, and translation in the context of practical life and human actions. Such new direction explored on the basis of Welby's significs as a theory of meaning focuses on the relation between signs, sense, and values. A particularly important contribution from semioethics today is the special attention it devotes to the relationship between the study of language (philosophy of language) and ideologies as social planning. This interdisciplinary enterprise is especially important for education in the context of so-called *global semiotics* (Danesi et al. 2004). The study of semiotics, according to eminent semiotician Thomas Sebeok, went through the paradigm shift during the last century thus passing through the boundaries of its earlier, exclusively glottocentric, sphere to include the whole of life.

Lady Welby on Experience and Meaning

Stating in her essay "Sense, Meaning, and Interpretation," originally published in two parts in the journal *Mind*, that everyone of us is in one sense a born explorer and our choices lie in what world we would explore, Lady Welby points to the value and meaning of human experiences in the world, which – as Charles Peirce made clear – is perfused with signs: it is a semiotic world. Her major *oeuvre* "What is Meaning?" was reviewed by Peirce, the event leading to an 8-year correspondence between

them (Hardwick 1977). Welby considered language to be just one, albeit preeminent, of the forms of broader expressions manifesting sense and significance that surpass solely linguistic representations. In an apparent affinity with Deweyan pragmatism and its focus on the reorganization and revaluation of lived experience, Welby addresses the most important components of experience as distinction and unification, comparison and combination, analysis and synthesis at once, and against the background of the confused manifold of the as yet hidden significance. Welby signals the need for studies on child development and criticizes the educational system for not sufficiently recognizing the child's inherent capacity for interrogating reasons, for the explicit "why" question. However, typical formal schooling systematically blunts the child's interest in language.

Reflecting on the progress of Welby's significs, Charles Ogden asserted that the most urgent reference and promising field for significs lies in the direction of education – to which we add now the importance of tracing the main lines of development as proceeding from significs to semioethics in the context of current advances demonstrated by edusemiotics with which Welby's theory demonstrates a remarkable affinity. For Welby, the theoretical exploration of meaning that embraces the whole of life experiences and cannot be confined to verbal signs, the related principle of translation, and the questions of education are closely interconnected. She was writing lessons, emphasizing the duty of saying what we mean and meaning what we say, and understanding what we hear or read, thereby promoting education in language for an adequate development of the interpretive and signifying capacity, ultimately for reflection on the relation between language, logic, meaning, and understanding. A "significal education" is education for critical linguistic consciousness, meaning, and value. Welby describes her concept of significs as

> a method of mental training, which, though implied in all true views of education, is not yet practically recognised or systematically applied. In a special sense, it aims at the concentration of intellectual activities on that which we tacitly assume to be the main value of all study, and vaguely call "meaning".

> Its instructive and disciplinary value must be secondary to this, as they are both ultimately dependent upon it. (Welby 1983[1903], p. 83)

Similarly to later semioticians like Roland Barthes denouncing the fascism of language or Michel Foucault's critique of the order of discourse, Welby denounces the tyranny of language and expression when they tend toward uniformity, homologation, and the adherence to values imposed from above by a given linguistic system and ruling social norms. She maintains that from early childhood everyone should be educated in the spirit of conscious awareness and the development of critical and creative thinking. Welby theorizes the concepts of difference and singularity, maintaining that each human being is unique, so that beyond commonality given by the relation with the other in social life, but from a "significal" perspective developed in the direction of semioethics, identity emerges in terms of difference and the logic of otherness – not unlike much later, poststructuralist and feminist, veins in educational philosophy that contributed to the development of edusemiotics as a novel theoretical foundation for education (e.g., Semetsky 2006; Noddings 2006, 2010) to date. Welby's approach implies education for listening to the other, for difference based on the logic of otherness, for being responsive to the other, and for engaging in dialogue with the other. The value of "otherness" is thus affirmed. Her long-term project was social change through the development of critical linguistic consciousness and training in responsible thinking based on values informing human actions (Petrilli 2009, pp. 371–379).

Welby's work prefigures both John Dewey's philosophy of democratic education and Charles Morris' contributions. Indeed, Morris referred to the school system as a form of social organization for the perpetuation of culture underlining the interconnection between education, communication, and political-ideological orientation of the community. He was adamant that the totalitarian society cannot give widespread attention to semiotics as regards its educational plans because such knowledge of sign phenomena would make it less easy to manipulate those who have this knowledge. He

asserted that it is precisely because of this fact that semiotics should have a prominent place in the educational system of a democratic society.

Welby worked on educational issues relative to all spheres of knowledge and experience throughout the entire course of her research. In her "Questions for Teachers," she formulates 50 questions bearing on theological and eschatological issues aiming to teach educators per se to interrogate the text. Text is composed by signs that need to be interpreted rather than taken as "facts." No text should be accepted passively. Interpreters must establish relations of active participation, relate dialogically to the text, interrogate it, and question value systems, behavioral patterns, and belief systems. The connection between language, logic, and meaning involves education understood as educating for meanings and values and laying down the pathway to critical thinking and ethical responsibility. Welby called for systematic training in critical and creative reflection and wanted "to persuade parents and schoolmasters that the first need is to centre all education upon the question of 'Meaning and how to convey it'" (1983 [1903], pp. 140–141). Educating in the meaningful use of language is our moral responsibility, the capacity to interrogate sense and significance – our ethical commitment toward the general improvement of the human condition and interpersonal relationships.

A significal education develops the power of interpretation and expression from different points of view. Educating for meaning and values teaches students to make distinctions and detect fallacies and confusions, whether intentional or unconscious, to establish connections and associations among ideas and research fields, to link all parts of growing experience, and therefore to apply in practice the principle of *semiotic translation*. Beyond interlingual translation, to *translate* is to confront, contrast, compare, and associate multiple signs and sign systems (whether verbal or nonverbal), linguistic expressions and value systems, spheres of knowledge, and lived experience. This involves identifying a common denominator (metaphorically of course), common language, and shared meanings on the basis of which one can interpret the unknown other, and thereby make sense for, and find significance in, our experience of relating to others. Reflecting on analogy and translation, also described as "inter-expression," the processes of transferral, transvaluation, and the translation of meaning through human experience constitute a test to the validity of meaning beyond enhancing signifying value generally. The first analogy upon which all others are constructed is the one between one's own mind and others: "we forget that we cannot say one word to our fellow without assuming the analogy between his 'mind' and our own" (Welby 1983[1903], p. 43).

Welby introduces the term "metalemma" for linguistic metaphors, underlining the importance of resorting to imagery as well as experimentation and verification for communicative effectiveness. Unconscious logico-linguistic mechanisms should be lifted to the surface of consciousness as a step toward dealing with inferential or interpretive inadequacies and communicative deficiencies at large. This, for Welby, implies developing a propensity for the critique of imagery and analogy from early childhood while acquiring adequate habits of analysis, verification, and classification. She signaled the need for training in the use of imagery (popular, poetical, philosophical, and scientific) as well as teaching strategies oriented to such awareness. She describes the "critique of imagery" as a method against confusing and fallacious inferential processes. Interestingly, Peirce's mode of abductive inference is typically considered fallacious from the viewpoint of the strictly analytical philosophy of language that affords no place for semiotic mediation and interpretation and posits signs as exclusively verbal and reducible to their direct representations. However, abduction is invaluable in edusemiotics that recognizes the unconscious dimension of experience and the necessity to become aware of it by developing self-reflective, critical, and creative consciousness. Interpreting the nonverbal "language" of images, translating it into verbal expressions, and utilizing all forms of inference including abduction, deduction, and induction are part and parcel of fully-fledged edusemiotics (Semetsky 2011, 2013).

Welby's *Significs* as a Theory-Practice Nexus

Welby's theoretical research was inseparable from practice: she was not only attending school lessons but also constructing elaborate lesson plans to conduct lessons herself on an experimental basis. In this context, Welby remarks:

> The following extracts are from a series of twelve familiar lessons on "Sign and Sense" given by a grandmother to a boy eight years old, and reported verbatim. They gave much delight, not because of any aptitude on the part of the teacher, but obviously from the natural affinity of the subject and the fascination of its problems to the young mind. The lessons, however, had to be discontinued from the time the boy went to school. It is to be hoped that the time is not far off when such lessons in worthier form will become the recognised introduction to the school course. (Welby 1983[1903], p. 306)

A significal education is education in training thought to identify problems and ask questions, rather than pave the path to final truths. Asking questions is a condition for the acquisition and transformation of our conceptual knowledge and practical skills: the dynamic reality of the question sweeps the mind forward in an endless movement to new and wider horizons. To develop an inquiring spirit in a child is much more significant than providing ready-made answers. Any answer in fact should be just a departure point for a string of new questions. Welby was keen to confront her ideas with the semiotic perspective and was convinced that we should not ignore the need to reassess the relation between languages and values in the direction of education founded on the study of signs embedded in life. Teaching methods should be revised and updated in light of research on language and meaning, while questioning the relation to values and applying in practice the principle of translation. Welby envisaged the children of tomorrow as being educated in *a sense of sense* so to understand what the meaning of "meaning" per se is. Children should be educated to understand what signs signify and to learn how to translate and interpret the dialectics pertaining to real practical life. Educating for meanings and values can provide guidance to better navigate through the "jungle" that we call

language. The children of tomorrow, whose education is indeed "significal," would be able to interpret and translate the signs of experience. Such new generation of students, if and when educated in significs and semioethics, will be able to understand the deeper meanings that are available today only to, using Welby's words, *the sheer force of genius*.

As all human beings are instinctively endowed with "mother sense" or "primal sense," such sensibility is a priori for the development of critical consciousness, creativity, and ethical responsibility. Welby comments that if mother or primal sense continues to be more vital in women than in men, this is because women are more capable of shaking off the effects of "high" civilization and typical or conventional education. She insisted on early childhood education and bringing up children in the spirit of crucial importance of preserving and utilizing all aspects of language, not only as regards the economy of knowledge but also using language for lucidity, grace, melody, dignity, beauty, and the power to express the inexpressible. The following passage deserves to be quoted in full to underline the importance of Welby's theory of meaning for edusemiotics as a new, and future-oriented, direction in the philosophy of education:

> We must remember that while the appeal to the matter-of-fact character would have told on the side of economy, of simplicity, and of efficiency . . . the appeal to the imaginative character would have told on the side of truer conception, whether abstract or pictorial, whether ethical or artistic, whether making for truth, goodness or beauty. The prosaic type would have seen the point best on the economical, . . .as a question of success or failure, praise or reproof, reward or punishment. The imaginative or emotional type would have seen the iniquity and folly of crippling or mutilating the most precious of its gifts, of starving instead of fostering a really vital energy. All alike would by this time have contributed abundantly to our store. For the whole mental atmosphere and attitude of a generation thus trained from the very beginning of life would be altered. Its centre of gravity would be changed. Its world would also at once be expanded; the area of the common interest enlarged and concentrated, and value of life revealed and enhanced.
> [. . .] We should at last touch [a child's] natural tendency to seek a "because" for everything – to link together all parts of his growing experience. As all fun and chaff, no less than all wit and humour,

depend on turns either of sense or meaning or significance; as the ludicrous depends on the incongruous, and our sense of the incongruous depends on the strength of our mastery of the congruous, this method of education would lend itself, as no other could attempt to do, to the child's craving to be interested, excited, even amused in learning. (Welby 1983[1903], pp. 212–218)

Conclusion

Welby's corpus includes a selection of extracts from different authors expressing their views on education, in support of her own position and touching on such themes as educational reform, teacher training, and student training strategies, the importance of motivation and interest in learning processes and of imagination, the objects of primary education, the place of classical studies in the educational system and of grammar, etc. Her focus on play and imagination in the acquisition of knowledge recalls Peirce's notion of the *play of musement*, later developed by Thomas Sebeok with regard to his concept of primary modeling. The present-day problems relative to educational theories and pedagogical practices show that an expansion of philosophy of education to the point of its convergence with semiotics is now necessary. It is such current expansion that constitutes the critical instance of philosophy as semiotics, that is, an open-ended field of inquiry and research demonstrating that the fully-fledged science of signs is always in the process of evolution, rather than being an achieved end result to boast about.

Welby's contribution to edusemiotics is thus indispensible, her historical place among such "edusemiotic precursors" as Peirce, Dewey, Deleuze, Kristeva, or Noddings notwithstanding. Nor is her theory of any small account as reflected in the fact that, with respect to other extant possible denominations circulating at the time, including "semiotics," she should have preferred to introduce the neologism *signifcs* to underline her inexhaustible interest in sense and significance, in *value* and not simply linguistic meaning. With her choice of the term "significs" for her research, the question she underlined is not that of whoever professes this or that discipline or subject matter nor in the established role of scholar, scientist, or intellectual.

Instead, it is the question posed by an ordinary person in everyday life, namely, what does it mean for me, for us, today, now, or later and what sense and what value does our practical experience have. This is a question that semioethics recovers and that also is central to edusemiotics.

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Ethics and Values Education

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Synonyms

Ethics education; Moral education; Values education

Introduction

Ethics and values education encompasses a wide variety of aspects, conceptual frameworks, topics, and approaches. Arising out of the field of ethics, it foremost has to be sensitive to a multidimensional and deep anthropological nature of human being and the recognition of this in educational processes. The relational and communitarian nature of ethics (arising out of the recognition of a human being as relational being, a being of community, and a being of dialogue) is extremely important and dictates reflections on justice, solidarity, compassion, and cooperation in the spirit of a genuine dialogue in the field of ethics and values education, which further call for openness, reciprocity, and mutual recognition. These aspects are of key importance for ethics and values education, since one of its main goals is to strengthen such dialogical and emphatic stance on all levels of educational process. These should not address and stress merely basic ethical norms and values (such as liberty, dignity and respect for life, equality, truthfulness, nonviolence, social justice, solidarity, moderation, humility, nondiscrimination, well-being, and security) but also turn to virtues that are at the heart of each individual development and development of a community as a whole. The dialogical nature of ethics and with this also of ethics and values education therefore stipulates openness toward the other and thus invites us to be open in the process of mutual growth and learning. In the formal educational process, an all-encompassing nature of ethical reflection and ethical awareness calls for an integrative approach, in which ethical topics are addressed in most if not all the subjects in school, trans-circularly, and in school life as a whole.

The global recognition of the importance of ethics and values education is well reflected in the 1996 UNESCO report of the International Commission on Education for the Twenty-first Century. "In confronting the many challenges that the future holds in store, mankind sees in education an indispensable asset in its attempts to attain the ideas of peace, freedom and social justice. The Commission does not see education as a miracle cure or a magic formula opening the door to a world in which all ideals will be attained, but as one of the principal means available to foster a deeper and more harmonious form of human development and thereby to reduce poverty, exclusion, ignorance, oppression and war" (Delors et al. 1996). Since the field of ethics and values education is very broad and includes changing trends, this entry addresses just some of its key aspects, especially those related to more recent views and approaches, which stress the aforementioned integrative, holistic, and comprehensive nature of it.

Ethics and Values Education

In a narrower sense the term ethics and values education applies to all aspects of the process of education, which either explicitly or implicitly relate to ethical and axiological dimensions of life and are such that can be structured, guided, and monitored with appropriate educational methods and tools. Evaluative and ethical dimensions are an integral aspect of every educational process. "Education implies that something worthwhile has been intentionally transmitted in a morally acceptable manner. It would be a logical contradiction to say that a man had been educated but that he had in no way changed for the better or that in educating his son a man was attempting nothing that was worthwhile" (Peters 1970, p. 25). Ethics and values education specifically converts this implicit goal into an explicit one, following a recognition that vital presence of moral and value dimensions cannot be sensibly denied and the idea of a value-free education process proved to be a delusion. Among the main aims of ethics and values education are the following: to stimulate ethical reflection, awareness, autonomy, responsibility, and compassion in children, to provide children with insight into important ethical principles and values, to equip them with intellectual capacities (critical thinking, reflection, understanding, decision-making, compassion) for responsible moral judgment, to develop approaches to build a classroom or school environment as an ethical community, and to reflectively situate an individual into local and global

communities with a mission to contribute to them. All this enables children to overcome prejudice, discrimination, and other unethical practices and attitudes and at the same time shape proper attitudes toward themselves, relationships they form, society, and environment

Ethics and values education steers children toward the search and commitment to fundamental values, meaning, and purpose in their lives. Ethics and values education is also oriented into nurturing respectful attitude toward others (both individuals and communities alike) and putting one's beliefs, attitudes, and values into practice. As such it cannot be limited to one school subject or a set of subjects, since the initial all-encompassing nature of ethical reflection and awareness calls for a trans-curricular, integrative approach. If one regards values in a broad way as comprising of principles, fundamental convictions, ideals, standards, or life stances that guide individuals, their evaluations, and behavior (Halstead and Taylor 1996) both in their personal and social lives and include in this also a broader reflection upon them, then in a sense a field of ethics education overlaps with values education. In a narrower sense values education refers to a process of educational transmission of dominant social values to individuals to somehow incorporate them into the society.

Aims of Ethics and Values Education

Some of the main aims of ethics and values education have already been mentioned: to stimulate ethical reflection, awareness, responsibility, and compassion, to provide insight into important ethical principles and values, to equip an individual with key cognitive and noncognitive (moral) intellectual capacities (critical thinking, reflection, understanding, decision-making, compassion) for responsible moral judgment, to reflectively situate individual into local and global environment, and to enable individuals to overcome prejudice, discrimination, and cultural and other stereotypes. Next, the aims include that ethics and values education encourages children to explore diverse dimensions of values and various possible

justifications for moral status of action and to apply them in school, at home, or in professional life. It paves the way for reflective exploration of different ethical evaluative standpoints and analysis of their practical implications. It also enables them to gain confidence and self-esteem, foster cooperative behavior, stimulate and deepen moral motivation, shape their character, and enable overall growth in terms of purposeful, morally excelling, and satisfying life.

All these are connected into a more general, overall goal, among others defined by Dewey. "The formation of a cultivated and effectively operative good judgment or taste with respect to what is aesthetically admirable, intellectually acceptable and morally approvable is the supreme task set to human beings by the incidents of experience" (Dewey 1980, p. 262). One can add to this that "[o]ne purpose of moral education is to help make children virtuous – honest, responsible, and compassionate. Another is to make mature students informed and reflective about important and controversial moral issues. Both purposes are embedded in a yet larger project – making sense of life. On most accounts, morality isn't intellectually free-floating, a matter of personal choices and subjective values. Moralities are embedded in traditions, in conceptions of what it means to be human, in worldviews." (Nord and Haynes 1998) It thus stimulates individuals to make values relevant for their lives in a concrete social context in an experiential and expressive manner. The open questions remain: How can ethics and values education be genuinely effective, how can it gain a real hold on children as opposed to a simple recognition or authoritative assent, and what are the (pre)conditions for its efficacy (Silcock and Duncan 2001)?

Approaches and Methods

One aspect related to ethics and values education is how much of it and in what form should be based upon ethical theory. The answers here vary quite a bit, but a consensus seems to be emerging in the direction that a straight transposition of particular ethical theories as the main content of

ethics and values education is ineffective. "Another way of looking at ethics education, a favourite among traditional philosophers, is to see professional ethics education as an opportunity to learn about philosophical theories of ethics. Under this approach, the students are taught one or more ethical theories (usually utilitarianism, Kantian deontology, or care theory) and are then taught to apply these theories to resolve, or at least inform, ethical dilemmas. Among philosophers of education, who have dealt with ethics of teaching, however, it is generally agreed that this applied-theory approach to ethics education is particularly problematic" (Warnick and Silverman 2011, p. 274). When we move from the early education toward professional ethics education, the stress on ethical theory of course enhances but in a sense that ethical theory forms the basis of ethics education (not its main contents) since it can increase students' understanding of particular normative or evaluative stance, increase their capacities to formulate cogent justification and moral arguments, increase their ethical reflection and capacities of good decision-making, and lastly underpin a particular ethical code relevant for the field of professional study.

In early education this role can be played by incorporation of critical thinking and philosophy with children and inquiring community approaches. These can also secure the necessary balance between individual and societal aspects of values education. "As Socrates would have it, the philosophical examination of life is a collaborative inquiry. The social nature of the enterprise goes with its spirit of inquiry to form his bifocal vision of the examined life. These days, insofar as our society teaches us to think about values, it tends to inculcate a private rather than a public conception of them. This makes reflection a personal and inward journey rather than a social and collaborative one and a person's values a matter of parental guidance in childhood and individual decision in maturity" (Cam 2014, p. 1203). That is why reflective and collaborative approach is so essential, since it can secure a middle ground between individual relativism and a straight imposition of dominant social values, it fosters development of good moral judgment, and it enables us

to put ourselves in the position of another and finally to develop a dialogic and inclusive stance.

There are several specific methods developed for the field of values education. These range from inculcation of values by teaching, storytelling, or school practices and policies to approaches that are more open and reflective (philosophy with children), address specific aspects of morality (care ethics approach, empathy approach, cognitive developmental ethics education, character education, infusion approach, etc.), or are oriented toward ethical action (service learning approach). One of the more popular approaches in the past was the values clarification approach (Simon et al. 1972), which (following the lessons of moral pluralism) rejected the idea of inculcation and offered an individual an opportunity for free personal choice or preference regarding values and their understanding. Criticism of this approach stresses particularly the questions about its effectiveness and the lack of philosophical and educational foundations, while one of the reasons for the decline of its popularity was also its erratic implementation. One of its main proponents, Kirschenbaum (1992) has later accepted much of this criticism and proposed a more comprehensive values education approach. It is based upon four aspects of comprehensiveness. The first aspect concerns the content, since comprehensive values education includes personal and social, ethical, and moral issues. Secondly, the comprehensive approach includes a variety of difference methodologies. Thirdly, the approach gets extended throughout the school life, including both classes and all other school-related activities. And lastly, the comprehensive approach includes not merely children and their teachers, but the entire community and including other institutions as agents of values education (Kirschenbaum 1992, p. 775).

Joined to this trend was also character education as a specific form of ethics education, focusing primarily on character development, e.g., development of moral virtues, habits, and other aspects of character, which then translates into morally right action and meaningful life. Building upon an ancient tradition and educational ideas of Socrates, Plato, and Aristotle, this form often

obtained a more limited form of moral education through the use of role models and exemplars as key tools. With the rise of modernity, it slowly started to lose its appeal and relevance, primarily due to secularization and a focus on rules of conduct. Ryan (2015) states that in the 1980s, as a response to concern about poor academic achievements and bad behavior, educators have rediscovered character education (also as part of a wider trend of the return of virtue ethics championed, e.g., by G.E.M. Anscombe and Alasdair MacIntyre). Character education thus focuses on cultivating virtues and forming good character habits and at the same time eliminating poor habits. It is crucial that it begins early in childhood and rests on the assumption that parents and later on teachers begin the engraving process of habituation to consideration of others, self-control, and responsibility, and later on this individual takes over the formation of his or her own character (Ryan 2015).

In recent decades there is also a rise of other integrative and comprehensive approaches, which take into account both traditional educational goals and new findings from moral psychology and other sciences. In line with this development, Silcock and Duncan (2001) put forward the following preconditions for successful values acquisitions in schools.

(1) Process condition: Optimal circumstances for the integration of values into students' lives must include in part their voluntary commitment at some stage of this process. This means recognizing their autonomy, competence, and personal choice in line with their moral development.

(2) Conceptual condition: Values education must lead to personally transformed relationships between students and themes and contents considered worthwhile, which means that the move from belief toward motivation and action presupposes "'co-construction', a consciously accomplished, cross-transformation where what is studied becomes a personal value through the act of commitment, while the commitment itself becomes a value-commitment via the potent nature of what is transformed (e.g., the potential a moral virtue has to change one's life)" (Silcock and Duncan 2001, p. 251).

(3) Contextual condition: There has to be at least partial consistency or concurrence between the values, virtues, ideals, or standards learned and wider sociopolitical context, since this is necessary for ethics and values education to be as free as possible from internal inconsistencies regarding both contents and goals of it. Thus, in order for ethics and values education to obtain lifelong lasting relevance, one must include a wider understanding and grounds of the mentioned values, virtues, ideals, or standards they appeal to.

Some Challenges

Quite a number of challenges have been raised in regard to ethics and values education. In the context of school education, one challenge is how to situate it within the curriculum, especially regarding more explicit approaches that promote specially dedicated ethics and values education classes, given ever more pressing time demands of the curriculum and a possible lack of sensitivity to age-specific moral maturity. Another challenge is the global, plural, and multicultural world we live in that puts pressure upon the question of which values to choose in the beginning. Here ethics and values education can either appeal to some core common values (e.g., Hans Küng's Weltethos approach) or specifically include education for an inclusive cosmopolitan society (the abovementioned values clarification process was in part developed in response to this recognition).

From the perspective of teachers and other educators, one of the main challenges is the recognition that they often lack a more specific knowledge about ethics and values and related competencies to tackle them in the classroom in a coherent and integrative way. Education professionals are often additionally burdened with pressures toward more effective educational outputs, working schedule flexibility and mobility, new topics in curriculum, and increasing number of

students with adjustment disorders and often also with a lack of effective lifelong learning opportunities. Often they express skepticisms about their assigned role as some sort of moral authority or role model. All this may decrease the willingness and strengthen the reluctance to actively adopt a particular ethics and values education model.

Conclusion

Ethics and values education is a challenging field and task, which must harbor aspect of thinking, understanding, and community in order to be effective. "Values education therefore cannot be simply a matter of instructing students as to what they should value – just so much 'teaching that' – as if students did not need to inquire into values or learn to exercise their judgement. In any case, it is an intellectual mistake to think that values constitute a subject matter to be learned by heart. They are not that kind of thing. Values are embodied in commitments and actions and not merely in propositions that are verbally affirmed" (Cam 2014, p. 1208). The central aim remains striving to develop an autonomous, responsible, and caring individual to form a morally good society.

Cross-References

▶ Dewey on Ethics and Moral Education
▶ Ethics and Education
▶ Ethics and Significance: Insights from Welby for Meaningful Education
▶ Ontology and Semiotics: Educating in Values
▶ Philosophy with Children
▶ Socratic Dialogue in Education
▶ Values in Science and in Science Classrooms

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Ethics Education

▶ Ethics and Values Education

Ethics of Care

▶ Ethics and Education
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Eugenics and Education

▶ Longing for Innocence and Purity: Nature and Child-Centered Education

Eurocentrism

▶ Humanism, Postcolonialism, and Education

Evaluation

Everyday Existence

Evolution

Examination

Examining the "Service" of Business Education for Women: A Service-Dominant Logic Perspective

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Synonyms

Shortcomings; Inadequacies

Introduction

Numerous studies identify failures in business school *output* (Thomas and Corneul 2012). Citing a gap between the skills and knowledge desired by prospective employers and the preparedness of new business graduates, the business school faces increased pressures to improve education. A lack of relevance in topics, outdated teaching methods, and insufficient faculty diversity are among some of the most predominant arguments for improving the business school experience.

These failures, and corresponding need for improvement, are particularly important for women as existing research have been found to have a (greater) disproportionate impact on women than men Connell and Ryan (2011). Currently, business schools are said to evoke a male dominant bias due to the focus on "hard" management and the overly aggressive and competitive environment (Parsons and Priola 2010; White et al. 2011). A cumulative effect of sexist use of language, presentation of stereotypical views of women, and instructors favoring male students reportedly dissuade women from enrolling and achieving success in business classes (Crombie et al. 2003). In support of these claims, recent statistics suggest that business is the only area of graduate studies that has not seen a similar increase in women.

Stakeholder groups such as prospective employers, business practitioners, and incoming students benefit from an improved business school curriculum because students may be better prepared to face the reality of an increasingly complex and diverse business environment (McMurray et al. 2016). In particular, because the business school relative to other areas of education is the typical entry point for employers recruiting management-level trainees, many suggest the College of Business (COB) should improve business practice. Unfortunately, reports suggest the experience of a business school education may extend beyond graduation to perpetuate gender equality in the workforce (Warhurst 2011).

Our research into these COB failures suggests many are likely the result of traditional views of economic exchange (i.e., economic science) upon which a significant majority of business thought and, more importantly for this context, business education is based. Recent research in marketing has demonstrated the failures of many classic economic assumptions, or premises; yet these same assumptions and corresponding failures as

a result of classic economic theory have not been addressed or articulated in any educational context. As such, we begin with a brief, yet critical, discussion of the (economic science) foundation upon which America's COBs were, and continue to be, based. We use this historical foundation to frame (and explain) how current COB curricula and teaching methods have negatively impacted all COB students, and particularly women. We then discuss how new marketing theories relating to service (singular) provide not only an alternative lens for understanding education's role and practice but also practical, and immediately actionable, avenues for improving the current COB educational system for women, as well as all students in general.

The Foundations of Business Thought and Education

When the opportunity of a formal business education emerged at the end of the nineteenth century with the creation of America's first business colleges (e.g., the Wharton School in 1881 – University of Pennsylvania; the Booth School in 1898 – University of Chicago; the Tuck School in 1900 – Dartmouth College), the prevailing thinking was that a nation's wealth, and therefore value, was rooted in one's access to natural resources and the, subsequent, wealth (i.e., outputs) one's resources could produce not only for the enhancement of the nation's members but also for export in exchange for the desired resources and outputs one lacked domestically (Smith 1776/ 1904). The fundamental practices taught in early COBs were very functional by nature and focused on practical approaches to management. During this time, most faculty were either current or retired industrial managers (primarily men) teaching male students who lived and worked near the campus in which they were enrolled. As economic thought and the focus of business education began to shift toward research (to improve business practices), economic science became the fundamental curriculum of these business colleges. Specifically, these theories were rooted in the ever-

growing need to enhance production and distribution efforts as production increasingly moved away from the agricultural fields and individual homes and into the factory. Theories pertaining to specialization of labor suggested these newly formed business colleges, and sub-disciplines (e.g., marketing, accounting), would provide the necessary efficiencies to enhances one's (America's) overall wealth (Vargo and Lusch 2004).

However, emerging disciplines' early efforts to gain legitimacy are often grounded in justification, differentiation, and classification of what is being taught and/or studied. Like that of economics earlier on, each subdiscipline believed that if they were to ever be "accepted" as viable "sciences," they must be able to model, in a deterministic sense, mathematical rules, and "laws" similar to those of mathematics and other (natural) sciences (e.g., Mill 1848). Quantifiable measurement became a critical, *and enduring*, focus.

Similarly, as economics was rooted in the transformation and subsequent sale of resources for maximal (exchange) value (e.g., selling price), COBs, too, became obsessed with the development of *tangible outputs* (goods). They, unlike their *intangible* "siblings" (services), were easily measurable, quantifiable, and highly similar to those resources empirically studied within economics. Furthermore, due to *repeated* misinterpretation and (mis)citation of Adam Smith's, the "father of economic thought," *Wealth of Nations* (1776/1904 – Vol. 1, Book 2, Ch. 3, pp. 314–318), services were deemed "unproductive" and, therefore, unworthy of any significant, much less leadership, role in business research/curricula.

A Goods-Dominant Logic to Business and Business Education

This overt, almost singular, focus on production outputs ushered in what has now become commonly referred to as the goods-dominant logic (GDL), which has dominated business school curricula throughout the twentieth, and even early twenty-first, century (Bettencourt et al. 2014; Vargo and Lusch 2004). Value, wealth, and, therefore, success have all become inextricably linked

to the production of tangible, homogeneous, and nonperishable goods. Thus suggesting that homogeneity in curriculum and students provide relatively more value due to increased efficiency. Services, conversely, have been commonly referred to as having IHIP (intangible, heterogeneous, inseparable, and perishable) characteristics; all of which are seen as largely negative for maximizing one's (e.g., a company or nation's) exchange value potential (Dunne et al. 2014).

A term that is almost ubiquitous in COB classrooms, corporate boardrooms, and even shareholder reports is *value-added*; this "value-added" lens is foundational to the GDL paradigm of business yet is easily applied to the current, educational, context. When viewed through a "value-added" (GDL) lens, students are "goods" or "products;" producers (faculty, curricula, administrators, etc.) *add value* (mold, create, or enhance) to their products (students). To further underscore how truly pervasive the GDL – and symbiotically the value-added paradigm – is *throughout all* of education, consider how often one might hear the phrase, "to *shape* individuals' (or even the country's) future" via education (or by being an educator).

Products need shaping (value-added) so they can later be sold in a marketplace for the greatest amount of value (exchange value). Understandably, a business education is heavily influenced by the value-added concept. The value-added concept may (un)knowingly be operationally appealing to educators because it positions (educational) value in terms of what each sub-discipline, college, and even university *controls*. Administrators do research what companies' likely responses are to different variations in the bundles of attributes taught to students, but these responses are only done to maximize the course materials embedded upon students (output). This focus suggests the value of the materials, labor, and services contributed to each output (student) is unidirectional, and it simultaneously underemphasizes the importance of the customer (recruiters in the marketplace), as well as the students who bring their own knowledge, skills, experiences to the classroom. Consequently, the integration of these resources

aids (future) employers in better identifying needs, solving problems, and providing solutions (i.e., to provide service) to their respective customers.

The Failure of a Goods-Dominant Logic for Business Education

As suggested earlier, a GDL perspective puts a heavy emphasis on analytical models and reductionism – what is measurable, quantifiable, controllable, and, therefore, easily standardized. It is a production-focused mentality centered upon generating outputs (e.g., students) that has led to a singular philosophy for educational exchange in the COB. Although this may have aided the efficiency of information exchange during that time, businesses, their resources, and therefore their current needs require business schools provide more than one (standardized) solution (e.g., vestiges of the assembly line). Students are not, and should not, represent production outputs. Similarly, not all students have, nor desire, similar capabilities either for jobs or, more importantly, *their educations*. What is needed is a *change in philosophy* – one that not only better addresses the needs of the marketplace (one's future employers) but also, and more importantly, the *service* of education for all students.

A Service-Dominant Logic for Education

Over the last decade, a new, and significant, paradigm of/for business has emerged – a Service-Dominant Logic (SDL) (e.g., Vargo and Lusch 2004). At its most foundational level, it argues that individuals *do not* buy, exchange, or even produce goods; rather, *service* (through the performance of deeds, processes, and performances for others) *is the root of all exchange* – business, social, interpersonal, etc. While Vargo and Lusch's (2004) initial conceptualization was framed for the marketing community, its application has grown significantly over the last decade to include many domains outside of business (see Bettencourt et al. 2014 and Vargo & Lusch 2016 for further discussion).

A Jobs-To-Be-Done Lens: Women and Business Education

If COBs are to best address the known impediments for women achieving a meaningful business education, they must view the problem(s) using a JTBD-lens. A JTBD-lens shifts the focus from what is being produced to enabling students to get their jobs done successfully. As such, this is achieved by asking the "right" types of questions, such as "How do women evaluate value when it comes to their educational experiences and desired results?", "What unique know-how does (our) COB possess that might help women make the most out of their educational experiences?", "How might our know-how be better integrated with the resources of partners (other colleges, company partners/recruiters, business thought-leaders, etc.) to help women cocreate the most meaningful educational experience(s) via the COB?", and "What are some of the current needs, and problems faced, by our resource partners so as to better understand the desired jobs-to-be-done by our (future) female graduates?"

By embracing a JTBD (service) lens, COBs can do a better job in their quest to provide a meaningful, and by extension, more valuable, educational experience to women. Understandably, such questioning challenges long-term, firmly-held assumptions about value and the role of not only the COB, but also, and more importantly, its female student population. Students are no longer "products" to be shaped, created, or managed; they are *active* participants in the value creation process. Similarly, employers are no longer customers of COB-created value; they too are active participants in the value-creation process. *Everyone* (students, faculty, companies, and colleges) *is a cocreator of value, and value is only realized through the exchange of service* (knowledge, skills, and abilities through the act of deeds, processes, and performances for the benefit of others).

Primary Jobs-To-Be-Done to Improve Business Education

The following discussion is by no means and attempt at an exhaustive, or comprehensive, solution to the current criticisms/trends associated with COBs. Instead, it is intended to provide a baseline understanding, or framework, upon which further, more specialized, investigations can build. In so doing, the conclusion will describe the three primary criticisms voiced in the literature, while simultaneously identifying how a JTBD-lens might identify appropriate questions and corrective measures to be taken in the future.

Question 1: What Teaching, and/or Learning, Approaches are Most Desirable by Resources Partners (e.g., Recruiters) and (Female) Students to Better Address the Needs of the Workplace? Extant research has consistently demonstrated that students have a strong desire to feel challenged while simultaneously learning topics that are relevant to future employment. Yet the traditional paradigm of business schools is hard-pressed to provide students with relevant business educations to meet the needs of diverse employers. COB courses largely require students to learn information that is often too technical, too heavily rooted in "best practices" (standardized), overly rational, and routinely focused on delivering short-term, non-contextualized, materials that lack lasting value applicable to the current (or future) business environments (see Augier and March 2007).

Such mechanized, overtly measurement-driven education has led many to suggest that COB students exiting college with underdeveloped, yet extremely important, behavioral skills, particularly those relating to effective communication, multicultural awareness, and leadership (Hawawini 2005). All of these "softer skills," as many refer to them, are routinely pointed out by recruiters as *critical* for building relationships, establishing trust, and evoking a sense of commitment and "citizenship" amongst colleagues and businesses alike. Taken together, critics suggest COBs are failing to sufficiently prepare students for an increasingly complex business environment where relational skills, the ability to interact with, and operate within, diverse populations, and a keen ability to problem-solve are paramount.

For women, the lack of relevance in coursework has additional implications for their

success. As a result of the indicated preoccupation with measurement and control in business courses, education theorists suggest students are taught under a pretense of a male moral bias. For women, relational theory (often considered to be a part of feminist theory) provides an approach to understanding women's experiences (this theory does not propose to apply to all women) that may be indicative of their sense of self and morality (Buttner 2002). Relational theory suggests that much of women's psychological development is rooted in connection to others. Relational practice in organizations contributes to employee effectiveness and enhanced work performance. Further studies suggest cultivating relational practices, particularly for women, operating in large corporations may lead to a competitive advantage in the marketplace as a result of better relationships, empathy, collective empowerment, and enhancing team effectiveness (Rapoport and Bailyn 1996). For women entrepreneurs, relational practices also reportedly enhanced the decision-making efforts of the startup team and aid in the development of a unified vision of their venture (Buttner 2001).

Thus one approach to improve the relevance of topics and materials covered in the coursework is to use relational theory in practice. For women, particular emphasis must be placed on the value of the diversity of experiences brought forth by various resource partners. Facilitating such relational, softer, skills in a classroom environment is sure to be *both* challenging and rigorous for faculty and students. From a faculty-member's perspective, one is no longer able to "control," or pre-plan, one's lectures and classroom-experiences. Such classroom experiences are *organic* and *dialog-driven*, which will surely put a premium on educator preparedness. However, the challenging-nature of such a service-driven, classroom environment does not fall solely at the feet of faculty members. If students are to enhance the collaborative and relational skills employers' desire, students must come (significantly) prepared to each and every class meeting; failure to do so will surely limit, if not eliminate, the possibility for dialog-driven, cocreative, learning experiences. Furthermore, cocreative learning

environments are predicated on students' willingness to put forward one's own judgments/ideas for critical evaluation by other students and the faculty member(s) involved. Dialog-based, seminar-style classes should simply result in a more organic, more idiosyncratic learning experience emphasizing the knowledge, skills, and experiences of all participants (faculty and students). Absent relational theories in practice, all students, but particularly women, will not have an opportunity to learn, engage, and practice these skills during their business school experience and, thereby, lose some of their competitive advantage in the workforce.

Question 2: What Current Teaching Techniques Used in the COB are Likely to Stifle (Female) Students' Maximal Learning Potential, and What Resources Exist That Might Later be Integrated to Enhance Students' Future Classroom Experiences? Unidirectional, lecture-based teaching continues to be the norm throughout much of the COB. This may be carryover from the GDL paradigm, the result of faculty fears over losing control of the material to be covered or perhaps some combination thereof. Regardless of its origin, predetermined, lecture-based classroom experiences fail to accommodate the learning preferences/predispositions of many students. Lecture-based teaching is a passive method of embedding knowledge in students. Furthermore, it limits the opportunities students have to meaningfully engage in conversation with faculty and students alike when a topic(s) of interest presents itself to the student. As such, it's not surprising that recent research finds students are 1.5 times more likely to fail a course(s) if taught in a unidirectional, lecture-based format (Freeman et al. 2014). Lecture-based classrooms simply result in many students perceiving the learning environment as "closed" for active questioning.

For employers, the lecture-based approach can be problematic because students are not prepared to communicate and consequently advocate for their ideas. One alternative implemented by many COBs is the case-based method of teaching. Popularized by the Harvard Business School, this approach to learning was designed to give

students the opportunity to learn by solving real-business problems. Unlike a lecture-based approach, the students lead classroom discussion while the professor is responsible for facilitating dialogue (i.e., coproducing knowledge and skills).

For women, the lecture-based and case-based approaches to learning provide different challenges. First, a lecture-based approach to learning is found to be less effective when students are not engaged in the classroom dialogue and to be particularly problematic for diverse student populations. For under-represented minorities' (e.g., women in the business school), alternative approaches to traditional lecture-based courses can improve perceived leadership skills, positively reinforce core concepts, and help students break down complex tasks. However, currently, self-reports suggest business cases are not valued similarly by women and men. A recent study suggests more than half of the women enrolled in business schools could not relate to the characters in the case studies because they are absent in many roles (Catalyst Survey 2000).

Thus potential options for improving case-based dialogue and learning may require altering characters in cases to include women in leadership roles with specific case-scenarios identifying business success from the perspective of women leaders. Furthermore, altering the structure of dialogue may bring increased benefits to women as previous research suggests much of the traditional classroom conversation is dominated by male students. Additional resources may include classroom response systems (i.e., clickers), flipped-classrooms, and connected learning. Arguably, the transition from viewing female students as similar to males (output) to cocreators of educational value may also bring a significant refocus to future approaches to classroom dialogue.

Question 3: What Resource Partners (e.g., Faculty, Industry Experts) are Available, or Should be Integrated in the Future, so as To Enhance (Female) Students' Ability to Cocreate New Knowledge, Skills, and Competences? Lack of diversity limits exposure to diverse experiences, skills, and knowledge from which to best examine a problem for possible service solutions.

Business, in particular, faces increasing globalization, rapid technology development, and changing workplace demographics. As such, the business school faculties, similar to business practitioners, are a critical catalyst of change to improve the diversity of students entering Corporate America. Industry experts suggest that gender-diverse companies are more likely to outperform their peers by 15% and ethnically-diverse companies are 35% more likely to do the same. Teams with diversity are much more likely to outperform their peers in team-based assessments, and for companies with women represented on the board of directors, they are also shown to outperform their peers.

From a JTBD lens, faculty are cocreators of service via their unique knowledge and skills. If students and business practitioners are to receive the reciprocal effects of improving gender and diversity profiles among COB faculty, then the COB must improve diversity of faculty teaching in the classroom. The value of these relationships is supported by recent reports suggesting that female COB students report not having adequate opportunities to work with female faculty while acquiring their business degree (Catalyst 2000). Furthermore, recent reports suggest a majority of the US flagship State universities lag far behind in their faculty diversity when compare with that of their student body (Myers 2016). Upon consideration of faculty as cocreators of knowledge, skills, and value, efforts to increase the diversity of faculty have critical implications to enhancing the diversity of students as well as that of future business executives. Thus industry practitioners must support the teaching of business facility to enhance the diversity of gender (and ethnicity) facilitating learning in the classroom today.

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Exclusion

▶ Social Imaginaries and Inclusion

Existential Individual Alone Within Freire's Sociopolitical Solidarity

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Synonyms

Angst; Authenticity; Conscientization; Dialogue; Existentialism; Freedom

Introduction

Freire's work has been recognized as lacking some careful and systematic attention to details on occasion (Dale and Hyslop-Margison 2011; Gerhardt 1993; Roberts 2010). This is not a serious criticism but is simply accepted as characteristic of his humanizing approach. One example of an event Freire identifies as important but does not provide systematic details about is the personally existential encounter an individual must face *alone* while being educated and liberated to participate in the sociopolitical solidarity of her context. Existential encounters are often marginalized due to the all-important focus upon dialogue between others. This contribution seeks to draw attention to the existential experiences of educational transformations to which Freire refers, explaining that these are not just juxtaposed

ideas (Hufford 2010) but must necessarily be experienced *alone* because of their existential nature and that these experiences are also considered to be a necessary element for his pedagogy for transformation.

Existential Influences

Themes such as dehumanization, alienation, domination, existential, fear of freedom, and authenticity are some examples of the terminologies that are present in Freire's writings which demonstrate the influence that existentialism had upon some of his thinking. Freire was well acquainted with the works of the existentialists such as Buber, de Beauvoir, Jaspers, Kierkegaard, Marcel, Sartre, and others and was personally acquainted with, and quite influenced by, Eric Fromm. Comparing the existential works of Fromm and Freire is quite illuminating and so several references to Fromm's works shall be made in this chapter.

While existentialist philosophies are readily recognized for centering their concern upon the *individual* who often feels alone, alienated, and anxious about the recognition of a certain sense of personal freedom, it is not systematically clear in Freire's work of a similar sort of individually felt dread and angst concerning one's existence. However, this chapter seeks to tease some of this out. Through his educational writings which are aimed towards liberating the oppressed social classes, particularly in South America, Freire often makes reference to the oppressed as "an exploited social class." This may be understood as an attempt to empower the entire membership of the group as a *social-political* phenomenon rather than as one which is centered upon each personally existing *individual*. This is often supported by Freire's (1985, p. 99) preference for such notions as "we think" rather than "I think."

It is clear from the descriptions of oppressive systems that Freire wanted us to understand them as *social-political* phenomena of cultural oppression affecting an under-class, which he described at times as the "masses of common people." Nevertheless, we can appreciate that he, along with other significant philosophers of education such

as John Dewey with his emphasis upon a "new individualism," recognized that an education for liberty involves a site of struggle in the lived existence of each *individual* – at least for one phase of the process. Freire (1998, p. 65) describes the felt impotence of the oppressed class as "existential weariness" because it is experienced by each individual who has a sense of being too insignificant to have any real potential for making a difference. He also describes this same "existential weariness" as a "spiritual weariness" because it is "emptied of courage, emptied of hope, and above all, seized with fear of adventure and risk" (Freire 1994, p. 114). This is particularly relevant for the notion of the "fear of freedom" which Freire appreciated is not easily overcome for those who are oppressed.

Freedom

For Freire, the overall aim is to attain liberty for all – including for the oppressors as well as for the oppressed. He often described such freedom as a culture for which a liberating education is an essential component. The sort of freedom which he espoused was not unlimited and irresponsible, "perverted into license" as if it were absolute. Rather it is a socially responsible freedom which respects the humanity in all persons irrespective of their social position in life.

Cultures of oppression which domesticate and silence the masses make people consider themselves as lacking the freedom and capacity to enact change and to assertively pursue greater liberty. Freire (1985, p. 115) importantly describes this system as a culture for controlling the aspirations of the oppressed as it is "crucial for dehumanizing ideology to avoid, at all costs, any opportunity for men and women to perceive themselves as reflective, active beings, as creators and transformers of the world." In addition to being dominant throughout the whole of society, this is a culture which is internalized at the *individual* level. Therefore, cultural action for liberating and bringing about changes in social structures, institutions, and practices *first* requires that *individuals* take action from a basis of self-conviction

rather than being caught up simply *following* and being led by what the rest of the crowd might be doing – even if the crowd is enacting a culture of liberty. This is because even in this social situation the individual herself is not authentically free if she is nevertheless being led passively by others. She must be led by her *own* personal convictions and intentions.

This is a crucial step that is often overlooked and is quite existential in nature. Freire's education for liberating, while a social affair involving dialogical relations, does not *give* freedom to people as if freedom was some*thing* to be "had" or obtained. Rather, freedom is more ontological in nature because it involves the very *being* of people. This transformation of individuals enables them to *be* free rather than just to *have* freedom, and as an ontological phenomenon this pertains to each individual who undergoes conscientization. This site of the individual struggling through reflective and critical thought is an important dimension for political action to begin, as Freire (2000, pp. 108 & 124) explains that others cannot "think for me" but liberated people must become "masters of their thinking."

The felt sense of freedom at the *individual* level is important for all political actions because it is "the freedom that moves us, that makes us take risks..." (Freire 1998, p. 102). He appears to reference Fromm's book *The Fear of Freedom* in the preface of his *Pedagogy of the Oppressed* in relation to education for critical conscious-raising because inevitably each individual must grapple with a new sense of personal freedom in order to enact living politically according to a new and emancipative culture which is often at odds with the dominant culture. Importantly, in Fromm's (1942, p. 91) book is his argument that we are unfortunately too often fascinated with "freedom from powers *outside* ourselves and are blinded to the fact of *inner* restraints, compulsions, and fears." In line with this, Freire (1994, p. 115) argues that this inner fear prevents individuals' struggling. Significant freedom for both Fromm and Freire is freedom of one's inner *will* – one's intentionality – which must be grappled with *alone* while in the midst of being in and with the world.

Conscientization and Existential Angst

Conscientization is a form of *intentionality* which provides personal *purposefulness* for being *with* the world. In order to pursue the process of enabling people to be liberated through education, Freire (2000, pp. 55 & 111) argues that "the first stage must deal with ...oppressed consciousness" which he described as "alienating domestication [and]...the bureaucratisation of the mind." Interestingly, he explains this as a consciousness which transforms "everything surrounding it into an object of its domination ...everything reduced to the status of objects at its disposal" (Freire 2000, pp. 58–59) where the people "no longer *are*; they merely *have*." This is a reflection of some similar ideas found in Fromm's *To Have or to Be?* and *The Art of Being*. Consequently, one of the first things he tries to encourage his students to appreciate is that culture is an anthropological concept which is distinctively different from the assumed static condition of the world of nature which is often accepted as being more "objective" (Freire 1975, p. 41).

His critique of the silence that is produced in the oppressed social classes identifies that these people believe too much in an objective reality for which they feel separated and powerless to influence. Drawing upon de Beauvoir, Freire (2000, p. 74) argued that "the interests of the oppressors lie in 'changing the consciousness of the oppressed, not the situation which oppresses them'". Hence is focus upon encouraging his students to consider the manner which they are actively relating to their own context.

Freire's (1985, pp. 51 & 68) process of conscientization centers the "existential situations of the learners" themselves including their sense of subjectivity and how they relate to a world of human culture. This is portrayed clearly in his book *Education for Critical Consciousness* in which he presents drawings of ten existential situations to his adult students which they could *relate* to as part of their present existence. Understanding human persons as relational beings who relate to their relations is a key existential concept. Developing this in some detail, Kierkegaard has famously argued that "truth is subjectivity." By

this he meant that in order to live a more meaningful life, *how* one relates to the entities around one has more significance that coming to "know" (in an objective sense) the nature of the "*what*" of the objects themselves. This existential notion of "subjective truth" appears significant for Freire. Not in the sense for establishing "truth" in an epistemological sense of gaining knowledge *about* the facts of reality but rather understanding is as "truly relating" to one's situation in an authentic manner, in a reflexive sense for how one *relates* to one's environment in which one plays an active and present role.

Freire's philosophy appears to be more action-oriented than that of the existentialist philosophers but he does value the internal strife – or anxiety – that is required to reorient a human life towards greater conscientization. Similar to the existentialists, he argues against a "spectator approach" to life and appreciates the existential angst – involving "emotional power" and what he refers to as the "dramatic tension" (Freire 1975, p. 29, 1985, pp. 128–129) of our existence. This is experienced when one encounters a critical revelation through the demythologizing praxis of a liberating education which seeks to uncover how one is positioned and then relates to the world one finds oneself "thrown" in, as it importantly seeks the raison d'être of the facts behind one's *facticity*. Freire (2000, p. 115) argues that critical conscious raising must seek a holistic view of things, "a totality." This is much like Heidegger's notion of "total relevance" and Dewey's notion of "significance"– it is the "big picture" understanding of the hegemonic culture in which we are embedded – and for Freire it is essential to give particular importance to the political dimensions of our world.

This "totality" view of Freire's is also akin to Kierkegaard's religious stage of giving meaning and purpose to all that we do. Indeed this totalizing "religious" view is able to provide a *why* for all entities in the environment, including a *why* for being moral. As Freire (1998, p. 53) explains that "what makes men and women ethical is their capacity to 'spiritualise' the world." Hence through education, *doxa* (accepted understandings of the dominant ideology) is challenged and

replaced by *logos* (totality of meanings in which persons participate in *making* such meanings) enabling people "to perceive critically *the way they exist* in the world" in order to transform it and themselves (Freire 2000, pp. 81–83). Freire describes this process of "becoming fully human" as an "existential experience" (ibid., p. 75) because it involves creating a culture within oneself often including fear and anxiety, but which is also shared in solidarity with others.

The inclination to develop existential purposes were previously absent in the minds and intentions of the oppressed because these are not compatible with the dominating culture. Therefore Freire (2000, p. 39) argues that conscientization "is a task for radicals" which is reflective of Fromm's notion of *Disobedience* for which he argues for the importance of being a revolutionary in the sense of being with a shared vision of a better world rather than just being a disobedient "rebel without a cause." It is understood that "the revolutionary process is eminently educational in character" (Freire 2000, p. 138) because it enables the students to better see the world as in need of change and is not a world with a "fixed entity," which is a key feature of Freire's problem-posing education. In a more tempered articulation of this same idea is that conscientization encourages *curiosity* to evolve as an important aspect of a strengthening personal intentionality. He explained in his *Pedagogy of Hope* that one of the reasons he gave his adult learners drawings of existential situations with which they had some familiarity was to render them sympathetic. In turn, this promotes curiosity, which in turn begins the process of conscientization (1994, p. 65).

Authenticity and Authentic Dialogue

There are frequent references to "authenticity" in Freire's works and in particular in relation to his understanding of dialogue. Authenticity is a key concept in existentialism, pertaining to the individual who makes/chooses one's *own* meanings, purposes, and intentions. Freire doesn't always use authenticity in this manner that is specific to existentialist philosophy. However, he does

appear to use it when he describes the oppressed as "unauthentic beings" and for claiming that the people's destiny was to overcome this in order to become "authentic human beings" (Freire 1975, p. 16). He also employed this term authenticity for better understanding the potentially liberating relationship between educators and their students as one involving "authentic dialogue."

Educators are not to impose themselves or their teachings onto students in a paternalistic sense because this would perpetuate the myth that students ought to be dependent on their teachers. Rather students and teachers are to be *with* each other as equal human beings – not necessarily united by identical ideas, aspirations, and feelings – but having a unity through diversity, oneness with difference, and a dialectical solidarity which is a hallmark of democratic living (Freire 1994). This is partly represented through Freire's notion of authentic dialogue and due to the inherent differences to emerge through dialogue he explains that this activity is able to provoke a critical attitude (Freire 1975). Sometimes this is represented in secondary sources as "egalitarian dialogue" or "dialogic inquiry." However, they present themselves as "methods" or "techniques" of pedagogy but for which Freire would be opposed. Both egalitarian dialogue and dialogic inquiry tend to be focused upon the rationality and validity of propositions and arguments for which all participants are free to challenge and engage with in a rather cognitive sense. However, these concepts do not adequately capture the existential dimension of authentic dialogue that was important for Freire (1975, p. 45) who described it in Buber's existentialist phrase as an "I-Thou relationship."

Freire (2000, p. 88) argued that "human beings are not built in silence" and so dialogue serves as "an existential necessity" to humanize persons. Therefore *authentic* dialogue brings to light the important existential personal *courage* needed by each individual student to overcome personal fear in order to transcend the oppressing culture which silences them from sharing their *own* understandings and feelings. Asserting one's own voice is not encouraged nor welcomed in an oppressive culture which manifests itself as an *inner* culture of "manipulating" and silencing voices because the individual believes herself not to be worthy or capable of having a view of her own that may be contrary to the culture of the status quo.

In summary, while Freire's works can be primarily understood as engaging with and transforming social-political practices, he greatly appreciated the important role of the existential site of struggle within individuals which they must encounter in order to participate in liberating education. This is evident through acknowledging that the dominating culture of oppression exists in the inner world of individuals in addition to being manifest in the external practices of society. Transforming oppressive political societies first requires the raising of critical consciousness or conscientization in the inner worlds of individuals. Freire argued that this might at first be encouraged through sympathetic recognition which leads towards curiosity. This might develop into a more determined interest to inquire into cultural practices more rigorously. The emergence of a new intentionality through this educative pedagogy might then enable individuals to face their fear of freedom and to choose new aspirations for themselves. Then as a collective of individuals, *action* in solidarity may follow. Of existential importance is the courage that is required to overcome the existential anxiety encountered at the individual level, at the interface between actual present conditions and the possible new conditions which are hoped for.

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Existentialism

▶ Existential Individual Alone Within Freire's Sociopolitical Solidarity

Experience

▶ Edusemiotics To Date, An Introduction of
▶ Ethics and Significance: Insights from Welby for Meaningful Education
▶ Deleuze's Philosophy for Education
▶ Phenomenology in Education
▶ Second Language Acquisition: An Edusemiotic Approach

Expertise and Educational Practice

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Do experts have distinctive ways of knowing and distinctive modes of deploying knowledge in performance? The idea that they do has been commonplace, but these claims have been subjected to considerable scrutiny in recent years. Consider:

H1: There are ways of knowing distinctive of expert knowledge.

H2: There are distinctive forms of rationality (the rational deployment of knowledge) characteristic of expert practice.

H1 is the key hypothesis. It is independent of H2, but if H1 were true, that would add weight to the case for H2. Contrariwise, if H1 is false, that erodes the reasons for H2. With regard to both hypotheses, it is useful to think of a spectrum from conservative to profligate conceptions of knowledge and rationality, respectively. The conservative opposes the proliferation of ways of knowing and forms of rationality; the profligate endorses proliferation. The key methodological issue concerns the status of the claims made in favor of either hypothesis: Just what is at stake in claiming H1? I shall focus on H1.

This entry provides (section "History") a brief overview of some of the historical sources for this debate, (section "Key Theoretical Claims") a summary of some key theoretical claims and methodological assumptions, (section "Assessment of Lines of Debate") an assessment of some of the main lines of debate, and (section "Lines of Development") an indication of potential development.

History

Sources for the idea of distinctive non-propositional ways of knowing can be found in Polanyi's notions of tacit knowledge (1958, 1966), Ryle's knowing-how/knowing-that distinction (1949), and the Dreyfus and Dreyfus taxonomy of expertise (1986) and appeal to Aristotle on practical knowledge and wisdom (Dunne 1993, Wiggins 2012). Evidence for the appeal to forms of knowing embedded in our practical engagement with the environment is often sourced from Heidegger and Wittgenstein – Stickney (2008), Simpson (2014), and Smeyers and Burbules (2006, 2008) – and the analysis of practitioner behavior (Schon 1983, 1987, 1991) and in psychological theorizing about how experts decide, e.g., Gigerenzer (2000), Gigerenzer and Selton (2002a, b), and Klein and Zsambok (1997). See Searle (1995, 2001) for the Wittgensteinian influence on the role of the "background" in models of rational action.

Key Theoretical Claims

Is there reason to proliferate ways of knowing? In debates in education, the idea of different ways of knowing, some of which are only available to expert practitioners, has become almost commonplace. The Dreyfus model that differentiates ways of knowing from novice to expert has dominated nurse education (Benner 1984), and Schon's account of reflective practitioners that appeals to both Polanyi and Ryle in its appropriation of the idea of nonpropositional ways of knowing has been influential in many fields of professional education. The prevalence of these claims is due largely to the idea that profligacy captures the phenomenology of expert performance. It strikes many that there is something about "the what it is like" to know and act in the moment that is difficult to capture in ordinary propositional modes of knowing (Eraut 1994, 2000; Hager 2000; Beckett and Hager 2005). Acting on the basis of expert knowledge often seems not to be based on a model of deliberation and weighing of reasons in the scales of some preferred model of rational action (Gigerenzer 2000).

This emphasis on phenomenology raises a central methodological issue: What question is being answered with H1 and H2? Is it a phenomenology question of the form "what is it like for experts to think and act in the moment?", or is it a constitutive question of the form "what constitutes the knowledge deployed in expert performance?". That is to say, to what is a theory of expert knowledge and action answerable? Is it answerable to phenomenological adequacy (it describes the "what it is like" of expert knowledge and performance)? Or is it answerable to metaphysical adequacy (it characterizes accurately the nature of the knowledge and its modes of employment in expert performance)? Call the latter metaphysical constraint on theorizing the constitutive constraint, for it amounts to the idea that our account of expert knowledge should deliver what is constitutive of expert knowledge; howsoever, it may seem to the knowing subject. The phenomenological constraint simply takes the requirement on our theorizing to be that our account fits the first-

personal avowals of expert knowers in action (Dreyfus and Dreyfus 1986; Collins 2010).

The phenomenological approach faces an obvious challenge: howsoever, it may appear to practitioners that they are using knowledge that is difficult to articulate and often deployed without full conscious awareness of what is being deployed; is there any good reason to think that what is at stake here (what makes it knowledge) is anything other than what is at stake with ordinary propositional knowledge? It is unclear why an account of what someone knows that informs their performance has to be answerable to what they say they know, let alone why the subject's first-personal access to what they know should be the deciding factor in how what they know is to be fitted into categories of types of ways of knowing. For this response to Gigerenzer's phenomenological case in support of H2, see Chater and Oaksford (2000).

Philosophers working outside education debates have only recently taken detailed interest in this, and the key debates are now foundational – is there anything distinctive about expertise with regard to the types and deployment of knowledge?

There are two main lines of debate – the McDowell/Dreyfus debate and the debate about the viability of Ryle's knowing-how/knowing-that distinction. In the former debate, McDowell (*locus classicus* 1994; see also 2013) has a line of argument that pushes the conservative view that all knowledge is propositional, contra the profligacy advocated by Dreyfus. The latter debate draws on McDowell but is more concerned with assessing Ryle's argument that knowing-how is separate from and cannot be analyzed in terms of knowing-that.

Assessment of Lines of Debate

See Schear (2013) for a thorough collection essential for the McDowell/Dreyfus debate. Central to the debate is the question:

What's a Proposition? A key driver for proliferating ways of knowing is phenomenology. It is

oftentimes difficult for experts to articulate the knowledge they deploy in their moment by moment expert action. At the extreme, they might even say that their response is intuitive. Dreyfus uses "intuition" to pick out the highest level of expert knowledge. The case for proliferation is based on the difficulty and sometimes inability to articulate a propositional content. Suppose you cannot articulate fully what you know in a situation and words are inadequate to express what you know. McDowell's key claim is that it does not follow from such inarticulacy that what is known is not a proposition. To understand how the inarticulate can nevertheless still be propositional, we need to clarify the concept of a proposition.

If you individuate propositions with sentences (you count propositions and distinguish between them by counting and distinguishing sentences – strings of symbols), then inarticulate knowings cannot be propositional. For example, a nurse might express the way she performs a complicated four-layer bandaging technique by saying:

1. I do it like this.

Sentence (1) does not individuate a proposition. The same sentence can be used by a pianist to express the way they play a particular phrase – the same words, different items of knowledge. If you count propositions by sentences, then what the nurse knows cannot be propositional. But the assumption that propositions are individuated by sentences has no good basis, and hardly anyone in contemporary philosophy would endorse that assumption. It is commonplace that we can make sense of propositions that are only expressible with context-sensitive words (like the demonstratives, "this" and "that"); see Luntley (1999) for overview and McDowell and Pettit (1986) for an early key collection. If so, the fact that experts often express themselves with such sentences tells us nothing about whether or not the knowledge expressed is propositional. It might seem to the expert that it is impossible to articulate what they know. But if that just means "impossible to express in full in context-independent language,"

that says nothing about what constitutes the knowledge in question, and it says nothing that is inconsistent with the idea that the knowledge is knowledge of a proposition.

A proposition is a complex structure, a combination of concepts that in virtue of its structure forms a whole thought that can be either true or false. A concept is a repeatable component of such structures. There is no more need to identify a concept with a word, as there is to identify a proposition with a sentence. There can be context-dependent concepts, and, when the words used in a context to express such concepts are then deployed in a sentence used in a context, you get a context-dependent proposition. Here's a simple example. Consider a shade of blue for which you have no name. You call it simply "that shade" as you point to it. Suppose you can recognize that shade on different occasions. If so, you can use the words "that shade" as a repeatable component of thoughts when, for example, you look at the paint color chart and think:

2. I like that shade; it will look good on my wall.

and use it again when looking at swatches of material for the curtains and you think:

3. I'm not sure that shade will go well if I use this material for the curtain.

If you endorse the proposition expressed at (3), that bears on the rationality of continuing to endorse (2) – most likely you will decide that the earlier thought expressed in (2) was mistaken. But your thought expressed with (3) only bears on your assessment of what you thought with (2) if the phrase "that shade" picks out the same shade of blue. But that is exactly what we ordinarily think is happening in such examples. The fact that what we are thinking is not fully expressible in words (we rarely remember the names for subtle shade differences on paint manufacturers' color charts) does not mean that we are not thinking propositional thoughts with (2) and (3). Indeed, the obvious explanation of why, on thinking (3), we retract the thought at (2) is precisely because there is an ongoing way of thinking about

the shade of blue expressed by "that shade." That concept figured in a candidate for knowledge at (2), it figures again in the knowledge expressed at (3) which is why, if we endorse the proposition expressed with (3), we retract the earlier claim. There is a continuous way of thinking of a color shade that features in both propositional knowledge contents. The knowledge at stake in the example is propositional knowledge.

The point generalizes. Consider the nurse who finds it difficult to articulate why she thought the patient was relapsing – it was something about their look and the pallor of their skin, but quite what it was that they spotted slips through the net of their descriptive vocabulary. Experienced nurses typically respond to very fine shades of appearance and behavioral difference in forming judgments about the well-being of patients. It does not follow that their knowledge is nonpropositional, for there is the option of saying that what they know is that the patient "looks like this" and then they point. Those who share their experience and training (including regular exposure and attention to fine differences of pallor, temperature, anxiety in patients' demeanor, etc.) will see what they are pointing at and be able to use that appearance in other cases. They will have a concept. See Luntley (2007).

The McDowellian idea that all experience, even the most finest grained differentiations, can be captured conceptually is a powerful tool in the case against proliferating modes of knowing; see Gascoigne and Thornton (2014). It does not mean that there are no differences between expert knowing and novice knowing, but the difference lies not in different modes of knowing. The difference might be in the objects of propositional knowings. The novice performs on the basis of propositional knowings, the content of which is given in context-independent propositions – the sorts of propositions that can be expressed in context-free language and the sorts of propositions that figure in general rules for performance that are applicable across many if not all situations. In contrast, the expert, although still using propositional knowledge, is able to exploit propositions that represent the particular details, the fine grades of difference in the saliences of situations. So their engagement with situations is more dependent on experience and what their perceptual skills make available to them (they notice more details than the novice). Their perceptual attention provides more bearing on what they do than the novice, but what their perception provides is not a different nonpropositional way of knowing. See Ainley and Luntley (2005, 2007) for details of a pilot empirical study of experienced classroom teachers that concentrates on the role of attention in differentiating expert knowledge.

A related debate concerns Ryle's (1949) distinction between know-that and know-how. Ryle had argued that it is impossible to reduce know-how to know-that. The knowledge that makes action skilful cannot consist solely in propositional knowing-that. His idea was that skilful performance required knowing-how and not mere entertaining of a proposition. Whatever propositional knowledge might be relevant in considering action, the agent needs to know not just what the proposition is, but how to deploy it. Skilful action requires knowing how to apply knowledge. If knowing-how were not separate to and more basic than know-that, then one could never act on knowledge, and one would merely entertain propositions. In a number of seminal publications, this argument has been put under intense pressure Stanley and Williamson(2001), Stanley (2005, 2011). The point exploits the McDowell insight outlined above.

Suppose you thought that knowing how to open a door by turning the knob was an irreducible item of knowing-how. Propositions about the way in which locks work can be entertained, but mere grasp of the propositions does not explain the action of opening the door – you need to know how to use the knowledge contained in the propositions. Stanley's key initiative is to note the existence of practical modes of presentations – practical ways in which things can figure in thought by virtue of practical concepts. One can know that doors open when the knob is *turned like this*. This practical mode of presentation is, like the McDowellian perceptually dependent concept – the shade *looks like this* – a context-dependent concept. It is a concept available to the thinker in virtue of their grasp of a

way of acting. As such, grasping the proposition that the door opens when you *turn the knob like this* would suffice to explain the action of opening the door despite the fact that it uses propositional knowing-that, not knowing-how. Once again, the case for proliferating modes of knowing is undermined by an analysis that shows that know-how can be captured with know-that.

Note that the intellectualist case shows that it is possible, once one grasps the point of context-sensitive modes of presentation, to analyze know-how in terms of know-that. The Stanley argument for intellectualism is a powerful tool in defense of conservatism about modes of knowledge. It does not, however, settle all the questions one might have about the knowledge that shapes expert performance.

If your question is, "Is it possible to analyze all the knowledge deployed by experts in performance in terms of propositional knowing-that?" then the McDowell and Stanley arguments provide a powerful case for epistemic conservatism. But suppose your question is slightly different. Consider the following:

(a) How does knowledge of activity-dependent propositions depend on activity?
(b) How do we acquire activity-dependent modes of presentation?

It is tempting to think that we acquire the knowledge involved in knowing that this is the way to open the door, by first knowing how to open the door. We first acquire the skill at door opening, and then we can label exercises of the skill by using the activity-dependent concept in thinking and talking about our opening it *like this*. In other words, one might think that although once acquired we can, as theorists, represent what the skilful actors know as propositional knowing that the door is opened *like this*; the skilful actor might never think or talk about their skill and simply know how to open the door. In that case, one might think that the know-how is, in terms of what underpins the skilful performance, the knowledge that matters. See Winch (2010, 2011, 2015). Wiggins (2012) has a defense of know-how against the intellectualism that repays careful consideration. Wiggins acknowledges the Stanley and Williamson point but claims that knowing-that is the "step child" of knowing-how. It is not fully clear what the force of Wiggins' claim is at this point. Is it just a return of the prioritizing of phenomenology of the knower's point of view, or is it a move toward a deeper point that attempts to tackle questions (a) and (b) above. If the latter, it suggests a direction that warrants further development.

Lines of Development

Context-sensitive concepts (whether perceptually dependent or performance dependent) are concepts that are dependent on experience – our experience of things as we perceive them and our experience of our own actions. If question (b) makes sense, there ought to be an account of how we acquire such concepts. One of the problems with the McDowellian position is that it can give no such account, see Crane (2013), Schellenberg (2013). For McDowell, experience is conceptually structured through and through; there is no level of experience other than that delivered to us by concepts. There is, then, for McDowell, no account of the origin or acquisition of context-sensitive concepts. One line of potential enquiry in these debates is to explore the scope for such an account.

There are many problems with this line of development. At a minimum, any answer to (b) requires a theory of how experience can present us with things (including the form of our own actions) in patterns that are less than conceptual. The very idea of a nonconceptual content to experience is, however, fraught; see Carman (2013) and Noe (2013), and see Gunther (2003) for overview of that debate. But it is not necessary that the contribution of experience need be in terms of content, albeit a nonconceptual content. Experience might provide a *relation* to things and properties in conscious attention and that is what enables concept possession. This idea is exploited in Luntley (2009) developing insights due to Campbell (2002). See also Luntley (2015) for the idea that a relationist account of attention contributes to the way the aesthetics of experience

plays a foundational role required for answering (b). That suggests a quite different account of what differentiates experts and novices: it is not the type of knowledge they deploy; it is their capacity for learning and generating new concepts. Experts tend to use more context-sensitive concepts and propositions because the form (aesthetic) of their experiential sensitivity and scrutiny provides them the resources to notice and attend to new things, find new saliences, and develop new ways of thinking and talking about the phenomena at hand. See Luntley (2011) for this way of differentiating expert and knower.

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