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Epistemological underpinnings of theory developments in educational administration

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Although it is difficult to categorise the philosophical positions of competing theories of educational administration, it can be said that four major forms of theory have been advanced in the field: traditional positivism, subjectivism, critical theory, and an emerging theory, naturalistic coherentism. The major perspectives developed in the field have been influenced largely by theoretical developments in philosophy. This paper aims to examine the different epistemological commitments of the four competing theories of educational administration advanced to date. The paper analyses the main ideas proposed by each of the four major schools of thought and focuses particularly on their philosophical assumptions concerning the nature of science and their approach to theorising about educational administration.

Introduction

‘What makes a good theory of educational administration good?’ and ‘If theories of educational administration should be scientific, what conception of “scientific” is appropriate to the field?’. Such second-level questions about the field have exercised theorists of educational administration for some decades now. Although it is difficult to categorise the philosophical positions of competing theories comprehensively and with precision, it can be said that there have been four major forms of theory advanced in the field: traditional positivism, subjectivism, critical theory, and an emerging theory, naturalistic coherentism. Given that the major perspectives developed in the field of educational administration have been influenced largely by theoretical developments in philosophy, the paper aims to examine the different epistemological commitments of the four competing theories of educational administration advanced to date. The paper analyses the main ideas proposed by each the four major schools of thought and focuses particularly on their philosophical assumptions concerning the nature of science and what an appropriate theory in educational administration should be.

The Theory Movement and logical positivism

The history of educational administration as a field of systematic study is not as extensive as that of many other disciplines. Most studies conducted in early decades

of this century reflected mainly practical concerns of developing techniques to understand administrative phenomena and, as a result, the theoretical frameworks of educational administration were slow to develop sophistication. From the late 1940s, as part of the quest for a useful theory of educational administration, a more systematic and rigorous scientific theory was introduced to the field. This period is called the 'New Movement' or the 'Theory Movement'. Although there were various events, including the formation of distinguished academic groups and individual contributions that initiated the development of the Theory Movement (see Griffiths, 1988), the most important event was probably the 1957 seminar held at the Midwest Administration Center of the University of Chicago. It was entitled 'Administrative theory in education' and the main concern of scholars in the seminar, including the late Talcott Parsons, was to develop a 'science of administration' (Culbertson, 1981, pp. 26–28, 1988, p. 16). According to Halpin (1970, pp. 162–163), the basic ideas of the Theory Movement can be summarised as follows:

- 1 that the role of theory be recognised and that 'nakedly empirical research' be rejected in favour of hypothetico-deductive research rooted in theory;
- 2 that educational administration not be viewed provincially, and especially as distinct from other kinds of administration; that administration, as administration, without adjectival qualifiers, is a proper subject for study and research;
- 3 that, because education can be construed best as a social system, educational administration must, in turn, draw heavily from insights furnished by the behavioural sciences.

As many scholars (e.g. Culbertson, 1988; Griffiths, 1985, 1988) agree, the main argument of the traditional scientific theorists of educational administration, especially the Theory Movement, was largely shaped by a particular philosophy of science, logical positivism (or logical empiricism). Although logical positivism is not a single philosophical view, it can, for present purposes, be considered to be the position developed between the 1920s and early 1930s by members of the Vienna Circle such as Schlick, Carnap, Neurath, Feigl and Reichenbach. Although there were many ideas that logical positivists promoted, the core tenet of logical positivism was the verifiability theory of meaning. It stated that a sentence is cognitively meaningful if and only if either it is analytic (e.g. a tautology of mathematics or logic) or it is in principle empirically verifiable or falsifiable by sense experience (e.g. observation) (Stroud, 1992, p. 264). Based on the verifiability principle of meaning, logical positivists were hostile towards metaphysics since such deep views about the nature of reality could, even in principle, be neither confirmed nor disconfirmed on empirical grounds. They also believed that subjects such as ethics, involving untestable claims, had to be expunged from the concerns of philosophers because they are beyond scientific investigation.

In order to understand the influence of logical positivism on the Theory Movement, the work of two scholars needs to be considered. The first is Herbert Simon. In *Administrative behavior*, originally published in 1945, he presented a new approach that emphasised the importance of the main ideas of logical

positivism to the study of administration. The basic premise on which Simon relied to develop his scientific theory was that administration is essentially concerned with decision-making processes bounded by humans' limited rationality. Therefore, for Simon, in order to achieve 'correct' decision making for the effective design of administrative organisations, it was very important to make a distinction between the factual and the valuational aspects of decision making. He believed that value claims could be neither true nor false on empirical grounds and so they had to be excluded from the domain of administrative theory:

The question of whether decisions can be correct and incorrect resolves itself, then, into the question of whether ethical terms like "ought", "good", and "preferable" have a purely empirical meaning. It is a fundamental premise of this study that ethical terms are not completely reducible to factual terms. . . . Factual propositions cannot be derived from ethical ones by any process of reasoning, nor can ethical propositions be compared directly with the facts—since they assert "ought" rather than the facts. Hence, there is no way in which the correctness of ethical propositions can be empirically or rationally tested. (Simon, 1975, p. 46)

This meant, to Simon, that the tenets of logical positivism should be regarded as 'a starting point' (p. 45) to build up a rigorous administrative theory. Although Simon's main concern was to develop a theory of decision-making processes, his attempts to sustain the distinction of value (or ought) and fact (or is) were very influential. In fact, the scientific nature of theory proposed in his book was welcomed by many educational administrators who sought a theory base for increasing the efficiency and effectiveness of their organisations.

The second scholar, central to the stimulation of theory development in educational administration, is Daniel Griffiths. Although he no longer believes that there can be a science of organisations comparable to a science such as physics or mathematics (Griffiths, 1986), he is a core thinker who shaped the positivistic nature of early educational administration theory.

In his influential paper, 'Toward a theory of administrative behavior' (Griffiths, 1957), he drew a logical positivist view of theory from the work of Simon:

Since theory is finally validated entirely by empirical means, it would be a serious error to think of theory in terms of setting ethical standards for administrators to meet. The use of theory must be restricted to factual content. . . . If science were to be tied to ethical concepts of society, there would be no science. (pp. 365–366)

For Griffiths (1983), like many of his contemporaries, logical positivism was 'the scientific ideology of the times' (p. 203) that should be taken as the basic knowledge base for theory development. He explained:

As a young man I was attracted to logical positivism because my training was in mathematics and science. . . . It seemed to me that the logical positivist approach

was the proper antidote for the self-serving testimonials, the pseudo-theories of Mort and Sears, and the plain nonsense that constituted the field of educational administration. (Griffiths, 1985, p. 49)

It was not surprising to see, therefore, that he accepted the definition of theory made by Feigl who was one of the members of the Vienna Circle. According to Feigl (cited in Griffiths, 1964, a theory can be defined as 'a set of assumptions from which can be derived by purely logico-mathematical procedures a larger set of empirical laws' (p. 98). Based on Feigl's view of theory, the key argument of the Theory Movement, namely that 'prescriptions do not constitute a theory' (Halpin, 1958, p. 6), was restated by Griffiths (1964) as follows:

The most commonly held belief regarding theory of administration is that it is a set of "ought", that is, a set of rules that tells one how to administer. Now, a well-developed set of values, having logical consistency and related to reality, is of crucial importance to the administrator. But this set of values is not a theory. The difference between theory and values is usually discussed in terms of the "is-ought" dichotomy. (p. 96)

Like Simon, and similarly based on the dichotomy between fact (or is) and value (or ought) maintained by logical positivists, Griffiths's main concern was to build up a solid administrative theory that is separated from personal experience of people. In other words, 'administrative theory' started being equated with 'administration science' in the field (Culbertson, 1981, p. 38). There were, however, some critical views that suggested that the Theory Movement had failed to deliver on its promises. For instance, Halpin (1970), one of the major disseminators of the main ideas of the Theory Movement, argued that 'the idea of administrative theory was, in the first instance, oversold. Because many of us had expected too much, too quickly, and too easily, we foredoomed ourselves to discouragement' (p. 167). Although Halpin's observation proved accurate, it was not able to change the general trend of scientific studies in educational administration.

To summarise, it appears that the Theory Movement was largely shaped by logical positivism. It promoted the separation of the domain of value from the domain of theory and introduced narrow views of science, advocating theories as hypothetico-deductive systems in which theoretical laws were justified by appeal to their entailment or empirical data.

Subjectivism and critical theory in educational administration

As the main ideas of logical positivism were refuted successfully by the work of philosophers of science (e.g. Feyerabend, 1975; Kuhn, 1962; Popper, 1935), the theoretical dominance of traditional scientific views of educational administration were challenged by some alternative views, especially subjectivism and critical theory. The pioneer, in this regard, was Thomas Greenfield. Although he did not intend to challenge the main ideas of logical positivism directly when he presented a seminal paper at the 1974 meeting of the International Intervisitation Program in Bristol, the substance of his work published since 1974 argued that the

logical positivist view of science is not a particularly appropriate view of science for educational administration.

The main purpose of his 1974 paper was to contest the traditional scientific views of educational administration, especially those of the Theory Movement, from a particular point view in the philosophy of science called 'subjectivism', although he initially used the term 'phenomenology' (Greenfield, 1975). He recollected stormy reactions when his paper was presented:

When I arrived in Bristol—I arrived late, two or three days after the beginning of the conference—people were already aware of the paper. The next morning, when I got up not to read the paper but to speak to it, I sensed an incredible tension. I went through the formula of mumbling a few words about the content of the paper. There was a forest of hands waving in the air. People wanted to challenge the things I was saying. To ask questions about it, to support it. There was generally a furore. (Macpherson, 1984, p. 2)

The furore presaged what has been described as the 'Greenfield revolution' (Evers & Lakomski, 1991, p. 76). Since then, Greenfield continuously developed his critiques traversing ontological, epistemological and axiological aspects of traditional theories of educational administration.

Greenfield's challenges to traditional positivistic theories of educational administration have themselves been challenged, notably by Griffiths and Willower, and the major arguments of those debates (i.e. ones about multiple perspectivism, the reification of organisations, Greenfield's conflation of science and positivism and his relativistic view of values) have been detailed in the literature (Evers & Lakomski, 1991; Gronn, 1983; Park, 1996). The disputants' competing views of science (i.e. subjectivism, logical positivism and constructive empiricism and Deweyan pragmatism) have been identified as the key reasons for their very different accounts of educational administration and organisations.

Greenfield inferred from the fact that it is impossible to access semantically a reality that is not interpreted by our conceptual frameworks, that there are multiple realities represented by the subjectivities of the conceptualisers—people. Based on Kuhn's view that, for example, the transition to the Copernican heliocentric theory from the Ptolemaic theory in astronomy was not achieved by new scientific observations but by changing perceptions of the world, Greenfield (1979) denied that there is a clear distinction drawn between theory and observation (e.g. p. 174). For him, there are no observational data, as evidence to justify theory, independent of the theoretical frameworks which guide the gathering and analysis of such data. So he argued that 'our theories create the facts that are relevant to them, and we can, therefore, only explore truth within a framework that defines what it is' (Greenfield, 1980, p. 29).

Noting the multiple interpretations of the way the world is, he took this to be a consequence of the theory ladenness of human perception. Although objectivity had been presumed to be achievable through the use of hypothetico-deductive models, Greenfield believed that this possibility was undermined by Kuhnian analyses. Any possibility of a best single representation of reality presumed to be achievable by relying on more empirically oriented research was denied.

Moreover, from his reading of the work of German philosophers such as Dilthey, Kant, and Weber, Greenfield reached the point that there is no science which is absolutely free from our subjectivity, especially from our personal value systems. In other words, the domain of fact cannot be separated from that of value since 'facts decide nothing. It is people who decide about the facts' (p. 43). Finally, on the grounds that choosing a general theoretical position about administration or making specific decisions in organisations tend to reflect each individual's value judgement and preference, Greenfield took the view that a new and broader notion of science—subjectivism (or humanism)—one which takes into account the prevalence of value and the importance of the diverse meanings of people, had to be brought to the field.

Following Greenfield's assault on the traditional scientific conception of theory and research in educational administration, social critical theory has been introduced into the field of educational administration. In examining critical theory, the views of Richard Bates would be focused upon as a key critical theorist within the field of educational administration. There might be some disagreements about who deserves the most credit, Richard Bates or William Foster, for the development of critical theory in educational administration. Scheurich and Imber (1991, pp. 306–307) argued that although Foster (1986) made the conceptions of critical theory more accessible for educational practitioners in his book, *Paradigms and promises*, it did not reflect as much deep theoretical thought as argued by critical theorists, and failed to deliver practical implications needed in educational settings. Bates was held to have made 'the most extensive and most sophisticated effort to apply critical theory to educational administration' in terms of theoretical articulations and practical implications.

The initial criticisms Bates raised against the traditional scientific views of educational administration were inspired by the British New Sociology of Education, especially Michael F.D. Young's (1971) *Knowledge and control* which had called for a phenomenological approach in understanding the close relationship between the power structure in society and the structures of knowledge being taught at schools. It was the problematic nature of the relativism inherent in this position that compelled Bates to blend this sociological view with various ideas from critical theorists, particularly an early version of Habermas's thinking. As suggested elsewhere (Park, 1999), three main ideas that Bates adopted from Habermas were (a) an intrinsic problem of advanced capitalism—the educational system's inability in alleviating the various crises facing the modern states, despite its sustaining rhetoric, (b) a communication theory based on the notion of the ideal speech situation as a means to achieving human emancipation thus establishing a better world and (c) a view of the origin of knowledge and the nature of science that encourages more rational discourse in education to prevent any one-sided approach solely reflecting technical, practical or emancipatory interests.

Like Greenfield, Bates (1980, 1983) strongly disagreed with traditional theorists who assumed that administration should be regarded as a value-neutral discipline. He pointed out that, despite the fact that broader notions of science had emerged in the field of philosophy of science, mainstream theorists in educational

administration were still using positivistic views of science which have little interest in accounting for the relationship between educational organisations and structural factors such as economic, social and political circumstances. As a result, he argued, the traditional theories of educational administration failed to rationalise the issues of how social structures can affect school systems to secure the main interest of the dominant class and its hegemony and of how a 'school's message systems (e.g. curriculum)' are used to serve the perpetuation of social inequality.

It was noted that the Theory Movement was limited by its reliance on logical positivism and its separation of value and fact and over-privileging of empirical data in theory justification. Similarly Greenfield's subjectivism can be seen to have suffered from its incapacity to deal with questions about how people develop moral knowledge and how conflicting values could be arbitrated. Bates (1994, p. 11) noted that Greenfield had failed to see the predominance of structure over humans' value systems; the latter was regarded as an individual matter by his subjectivism. On the other hand, by noting that value matters cannot be explained without considering structural factors, such as the economy and the political system, Bates argued that a dialectical approach to administration supported by critical theory is needed in the field to maximise individual value within the common and mutual good of society:

A dialectical view of administration and an emphasis on the democratisation of organisational and administrative life would appear to be major achievements in the move towards a more democratic and humane society. They would also be major achievements in the redefinition of public and educational administration and their role in the resolution of the crisis tendencies of the state. (Bates, 1985, p. 30)

Bates, therefore, believed that educational administration should be more concerned with promoting 'collective social value', such as participatory democracy and human emancipation, to build up a 'better' society.

To this point, the paper has been primarily concerned to consider how the field of educational administration has gradually acquired an epistemological awareness through the work of key theorists who had to explore the limits of logical positivism, subjectivism and socially critical theory. The point being made is that traditional administrative theories were increasingly being challenged by alternative perspectives because of their narrow view of science as an enterprise which excludes subjective experience and social and political contexts, yet it is these that are needed to understand educational organisations and administrative practices. As Culbertson (1988) noted, at the heart of these ongoing debates lie epistemological issues. Willower pointed out in 1975 that there had been no serious epistemological study in the field of educational administration; and, indeed, epistemic concerns remained largely untreated in the theory debates until 1991 when, with the publication of Evers and Lakomski's book, *Knowing educational administration*, the view now known as 'naturalistic coherentism' was presented in the context of criticism raised by subjectivists and critical theorists against traditional theories. Proponents of naturalism argued that the alternative views had

fallen into the same trap, as traditional theories had mistakenly equated the notion of science with positivism.

Naturalistic coherentism

From Evers and Lakomski's point of view, there are much broader post-positivist accounts of science that do not partition or discount many valuable areas of knowledge as unscientific. Critics in the field, they argued, were mistaken in viewing science as being in opposition to humanism. On the contrary, Evers and Lakomski maintained that, for the last several hundred years, science has proven to be the most fruitful knowledge resource for human beings. The more effective ideas of science have allowed humans to rise above myths and social ignorance, they argued, by offering an understanding of the way the world really is.

Given that empirical data gained by observations tend to be affected, if not absolutely, then partially, by our theoretical frameworks, Evers and Lakomski agreed with the above critics of positivism that theory justification required more than just empirical adequacy. They argued, however, that the critics made another error in overemphasising the role of human subjectivity (e.g. personal preference, value) in justifying a theory. In order to be able to make the justification of a good theory possible, they argued that we need to employ the so-called 'super-empirical virtues' of theory (e.g. consistency, simplicity, comprehensiveness, conservativeness, explanatory unity) a proposal supported by their combination of particular views of epistemology and human cognition—a system of ideas they characterised as naturalistic coherentism (see Evers & Lakomski, 1991, chap. 2, 1996, 2000).

For Evers and Lakomski (1991, p. 42, 2000, p. 151), a coherence theory of justification was quite compatible with the correspondence theory of truth. As scientific realists, they believed that there is a real world out there regardless of what theory does and, further, that what theory can do is only to provide an approximately accurate representation of the real world. The best candidate theory to 'figure out' the world more closely, they argued, is likely to be determined by reference to coherence criteria (including the super empirical virtues). The upshot of such more sophisticated epistemic criteria is, they believe, better science. So, far from theory choice being a subjective matter, it is, they held, objective, with some theories better than others, those selected by a process of justification of knowledge governed by coherence criteria.

Following Quine (1969), Evers and Lakomski also took the view that epistemology cannot be separated from natural scientific accounts of human cognition, since it is impossible to learn theory without proper descriptive accounts of how humans come to know. This was identified as the main reason why they became more interested in applying some ideas of cognitive science, especially neural network models of human cognition, to the field (see Park, 1995).

Naturalistic coherentists hold that a physical version of theory (e.g. a pattern recognition in our brain) can narrow the serious gap between theory and practice in the field of education. Traditionally, theory has been expressed in abstract sentences or academic propositions (e.g. knowing that) and this kind of knowledge

has not been able to help educational practitioners and policy makers sufficiently in dealing with mundane problems in a real world and developing satisfactory practical solutions. As a result, the relationship between theory and practice has been presumed by the field to be one of distinctness or apartness, rather than one of mutual reciprocity. By noting that education itself is a carefully designed activity, and thus heavily reliant on theory, and deeply engaged in practical activities such as teaching and learning, the chances of successful learning can be improved drastically by integrating practical experience with the development of theoretical knowledge. The point is that educational theory needs to reflect practical concerns whereas educational practice is likely to be improved by theory developments. Naturalistic coherentism helps provide such a synthesis.

Evers & Lakomski (1996, chap. 10, 2000) have argued that the adoption of neural network models of human cognition (seeing theory as 'prototype activation across a vast population of neurones' in brains) will provide a physical version of theory which is radically different from traditional views of theory in accommodating the complex nature of practice and the acquisition of general skills (e.g. knowing how). They have drawn on the main ideas of the Churchlands concerning human beings' knowledge acquisition from 'infancy onwards' (e.g. Churchland, 1989, pp. 297–303). Children learn social norms and value judgements, having observed and experienced a number of various social situations, by storing information of prototypes corresponding to those situations in massively well-connected neurones of their brain. And the learning achieved by their contact with social environments seems to have little to do with rule-based sentential models of theory. Naturalistic coherentism adopted the view that if we are able to have clearer natural scientific accounts of how the brain represents knowledge, a theory of practice will be available in the near future. A great deal of work in cognitive science, especially neuroscience, is in progress, concerning the way the brain represents knowledge. Naturalists believe that the question is certainly an empirical one that needs to be advised by scientific ideas. Evers and Lakomski (1996, p. 284) confidently expect that commitment to naturalistic programs of research into the cognitive activities of humans will yield 'a unified account of theory and practice'. For this reason, their latest book entitled *Doing educational administration: A theory of administrative practice* has largely consulted with recent work in cognitive science in researching the main concerns of educational administration such as decision making, organisational learning, administrator training and leadership.

Considering that the theory debates reflect each theory's different philosophical, especially epistemological, assumptions, it is not surprising that naturalistic coherentism itself, as with other perspectives, has been the object of critical examination by other scholars (see Allison & Ellett, 1999; Evers & Lakomski, 1996, Part 4; Park, 1997). The more recent alternative theories and naturalistic coherentism are currently in contention as to which is the most appropriate approach to conceptualising the theory of educational administration.

Summary

This paper has identified the various accounts of the nature of theory and knowledge offered by scholars holding very different views of philosophy of science. It has also shown how these accounts have spurred a great deal of debate about how theorising about educational administration should be approached. Generally, in comparison with its three main theoretical rivals, naturalistic coherentism has offered the most satisfactory philosophical theory base, as a fresh approach with broad practical applicability as well as providing more inclusive theoretical scope than the other theories in the field.

Since there is no 'Archimedean point' in epistemology, there is no absolutely certain theory. The history of science is in large part a history of theories rejected because of fruitful challenge by rivals. This suggests that epistemological debate will be an essential condition for development of an increasingly respectable knowledge base in educational administration. Such debate and scholarship will need to be conducted in a public manner for the sophistication of theory and the growth of knowledge in the field to advance.

Keywords

coherence	educational administration	epistemology
critical theory	educational theories	knowledge base

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