Book Reviews

Time for Science Education: how teaching the history and philosophy of pendulum motion can contribute to science literacy
Michael R. Matthews, 2000
New York/Dordrecht, Kluwer Academic/Plenum Publishers
xxviii + 439 pp.
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This is a rich and important book. It is rich in the themes it addresses and the detail of the scholarship. The theme is ostensibly the teaching and learning of science within the broad curriculum of a liberal arts education in contrast with the teaching and learning of science for the elite few who manage to cope with it. But other themes quickly emerge that underpin this first theme. One theme has to do with the study of a number of related episodes in the history of science from early attempts to measure the passing of time to the development of a theory of the pendulum by Galileo and others, and to the development of the pendulum clock. A further theme is philosophical, namely, how Galileo in particular developed a new way of approaching issues in science that shifted away from the dominant Aristotelian approach of his own, and earlier, times. Another theme is technological and bears on the important intertwining of pure science and technology, especially the need for technological development to test some of the theoretical claims made in pure science. There are yet other themes which deal with the religious and more general cultural context in which all of these developments took place. Finally there is a theme within science itself, namely the proper theory of the motion of a pendulum. Science educators, historians and philosophers of science, cultural theorists and even scientists will find something in this book of interest in their respective fields. It is this interdisciplinary context that also makes this an important book.

Matthews is no sycophant of some of the fashions that blight study within some of these fields. One of his aims is to resist the claims of a constructivist approach to teaching and learning. There are a set of problems and issues that Matthews outlines in the history of science and its teaching and learning that cannot be satisfactorily dealt with by constructivism. This is particularly true of Galileo’s investigations into pendulum motion; he had to overcome, with a quite radical epistemological reorientation of scientific method, the constructivist appeal to make sense of what he (or his group collectively) experienced. For Galileo the deliverances of experience had to be challenged. Granted this, what sense can pupils make of their experience of pendulum motion, either left to their own devices or in the company of others equally at sea in a world of just sensory experience? Matthews is also sensitive to the cultural and political context in which science occurs. But he is no advocate of the Strong (or of any other) Programme in the sociology of scientific ‘knowledge’ which bids us to
seek out the political and cultural interests which allegedly determine, or cause, our very beliefs in scientific hypotheses. Nor is Matthews ready to follow the latest fashion of denying that something occurred in the seventeenth century that can be appropriately called the ‘scientific revolution’ (though he does not accept crude accounts of what this might be). Nor is Matthews a follower of postmodernist, deconstructionist or whatever other fashions. Educationalists (and others) should throw away their books on scientific ‘knowledge’ by Lyotard, Latour, Foucault, Shapin, Bloor, etc., and immerse themselves in Matthews’ book which makes excellent use of those approaches to science and its history and philosophy that have been prematurely abandoned in order to renovate science education.

Chapters 2 and 3 deal with the measurement of a number of the Earth’s features; but they particularly focus on navigation, the longitude problem and various ways in which time was measured by various kinds of clocks developed up until the renaissance. Chapter 8 tells us more about the use of pendulum clocks to solve the problem of longitudinal measurement. These chapters, along with Dava Sobel’s book *Longitude*, would provide an excellent basis on which courses in science could be developed. Chapters 4, 5 and 6 involve more complex science in that they relate the development of the mathematical theory of pendulum swing from Galileo to Huygens. Chapter 8 spells out the role of the pendulum in Newtonian mechanics while Chapter 9 deals with the adoption of mechanical analogies in science and philosophy more generally. Chapter 10 considers philosophical issues to do with the theory of pendulum motion that was finally developed, while Chapters 11 and 12 concern the teaching and learning of theoretical science (as exemplified in the case of the pendulum) and related pedagogical issues. The final chapter, 13, sets out Matthews’ overview of his task in relation to education and culture more generally.

What these last chapters show is Matthews’ commitment to the use of the history of science as an important repository of lessons for the teaching and learning of science and how these episodes can be employed to that end.

Galileo had some aspects of the theory of pendulum motion wrong (see the end of Chapter 5) that were finally corrected by Huygens (see Chapter 6). Despite this, Galileo developed a novel approach to the analysis of a number of problems within the theory of motion, from planetary to pendulum motion. His approach was to first ‘construct’ an abstract model of the phenomena. These models were described mathematically; often they employed geometric models. The word ‘construct’ is used deliberately for it is the scientists that make, or build, the ideal models. But this gives no comfort to constructivists about science. These models do not derive in some manner from experience; this was the old approach of the Aristotelians that Galileo’s patron del Monte adopted. Matthews spells out this important methodological innovation of Galileo and the impact it has on how one might teach, and learn about, pendulum motion.

Of course any abstract model of a motion may not fit what one actually observes. The lack of fit may be due to a number of things, from some unknown force variable that has not been taken into account in the mathematics or geometry of the model to features deliberately set aside in the idealisation such as forces due to friction or air drag. If one is strongly empiricist and puts strong emphasis on the deliverances
of sensory experience then, from Galileo's point of view, one will not only not be able to take seriously the models he proposes but, more importantly, one will ignore the important new approach that Galileo develops towards the very way in which science itself is to be conceived. These issues arise acutely in the controversy Matthews discusses between del Monte and Galileo. Del Monte was a representative of the 'old' way of thinking, in which what is of primary importance is what experience tells us, and the conflict that arose between experience and what Galileo's models said would be observed. But Galileo's reply was that his model is essentially correct; what needs to be taken into account is the particular conditions in which pendulum swing occurs and this has features not accounted for in the model. And in any case no ideally constructed model will fit reality exactly, though there will be better and better degrees of fit.

This debate is to some extent still with us today since scientists, as they often say, attempt to model reality. Of course one wants models which approach what we can observe as close as possible. But in some cases it is impossible to get models to do this as accurately as one would wish (including models which are computer simulations of phenomena such as the weather, or ozone depletion in the upper atmosphere). But Galileo's use of models, and assumptions about them, has become a central part of much of the methods of science employed in both the natural and biological sciences. What then needs to be done is to test the fit of the models and to look to what modification can be made to the models for better fit, or more radically what different model might be proposed. In this respect the history of Galileo's views about pendulum motion set out in Chapter 5 should be read in conjunction with Chapter 10 which looks at the richer philosophical position about the nature of scientific theorising and how models evolve with the growth of science.

It is here that Matthews locates the core of his disagreement with constructivism. Not only does constructivism give us a misleading picture of an episode in the history of science when it is used as a theory of the sciences themselves (this is the approach of many from Piaget to von Glasersfeld who apply their views to the actual history of science). Constructivism's core idea is that all beliefs, but particularly scientific beliefs, are constructions out of sensory experience. But it is not clear at all how one gets from this empiricist position (advocated, for example, by del Monte) to the position of Galileo which is that of abstract mathematical model building. Now one could use the word 'constructivism' to describe the activity of scientists; they do build, or 'construct' models which are abstract or ideal and not real items to be found in this world. But the main difference between this use of the word 'construction' and its use by certain educational theorists is that for the latter the constructions are built out of experience only. The are not models hypothesised to account for our experience. For scientists, such as Galileo, the models come from geometry and mathematics (but applied in ideal, non-actual or non-real situations). Matters become worse when one considers constructivism as a theory about education and learning. What Matthews' historical investigations show is that not even a Galileo could have arrived at his theory of pendulum motion by focusing exclusively upon what sense he could make of his own experience (and paying no attention to model building and their test). So how could we expect pupils to come
to understand pendulum motion by attempting to make sense of their experiences, either by themselves or with the help of their peers or teacher-facilitators? A little bit of history and philosophy is needed to get us out of this impasse.

Galileo himself expresses his view about the nature of the scientific enterprise through his mouthpiece Salviati in his *Dialogue Concerning the Two Chief World Systems*: ‘there is no limit to my astonishment when I reflect that Aristarchus and Copernicus were able to make reason so conquer sense that, in defiance of the latter, the former became the mistress of their belief’ (Stillman Drake translation, p. 328). Before him Copernicus had built a model of the solar system which defied all experience, yet which was found to be empirically adequate (in that it fitted much data about planetary positions) and also a model which was more similar to reality than any other previous model. Such a ‘rationalist’ stance is consistent with Galileo’s use of mathematical models which, of course, remain open to comparison with experience. Such an approach also highlights the problem-solving stance towards science that such model building entails. And such a problem-solving stance should also inform the teaching and learning of science.

Galileo did not have a model of pendulum motion that was correct, as Matthews discusses at length. A much better model was provided by Huygens (Chapter 6). Newton’s theory is spelled out in Chapter 8 while Chapter 12, amongst other things, develops a modern pedagogical approach to pendulum motion which is then related to the work of Galileo. What these parts of the book emphasise is the ability of science to revise and improve, or reject, the models that have been proposed. They bring out the cycle of ‘conjecture and refutation’ that occurs time and time again in the history of science. This central feature of science, that even a modicum of its history illustrates, is something that any pedagogy of science ought to take into account. It also shows the necessity for the recognition of what is false either in science, or in a pupil’s thinking, and the need to correct the falsity.

As indicated at the beginning of this review, this is a book that stands at an important interdisciplinary intersection. At the intersection we find not only theories about the teaching and learning of science, the nature of science itself, the history of science and the philosophy of science; we also find an account of the technological spin-offs of a science and its technological needs for the purposes of testing hypotheses in science—along with the social and political context of that science and its associated technology. All of these themes can be exploited to make the teaching and learning of science an exciting enterprise that can lead the students down a multitude of different paths of discovery and inquiry (Matthews even discusses the impact of his work on the pendulum for music students). It is this reviewer’s hope that teachers will read this book and use it as a source for the designing of courses in science that will enliven the classroom. But the book has much more to offer. It will also enable teachers to become much more deeply informed about an episode in the history of science that has many ramifications in many different directions. So informed they will be better teachers of science and what it means in our lives.

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Positioning Subjects
Stephen Appel, 1996
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The importance of this book lies not only in its theoretical scope and depth, but also in its courageous exploration into new theoretical ideas. The author asserts his theoretical ambitions to 'develop a psychic economy of subjectivity' by demonstrating the ways in which the 'critical sociology of education and psychoanalysis can profit from each other'. Appel claims that this can be done by introducing Freudian psychology to critical education studies, that is by making 'Marx and Freud compatible', and by making the Althusserian concept of ideology-in-general useful to education. Undoubtedly, work that enables educationalists to understand better the link between the social and the individual is extremely important to overcoming the human socialisation lacuna in critical education studies. Appel's ambitious objectives and exploration are needed. So, to what extent does this book contribute to our understanding of the processes by which the social becomes personal on the one hand, and schools socialise children on the other hand? To what extent have the concepts of major theorists become 'loosely knitted' in a coherent argument that opens up exploration in an original and creatively conceptualised direction of thought?

Certainly the opening attack on critical studies of education, and the declaration of a strong adherence to and defence of Althusserian concepts and their usefulness in developing a social psychology, immediately engage the reader's interest. So too does Appel's effective use of the literary device of an occasional, but strong, authorial voice to signal a further development in the argument. These strengths are reinforced by a clear writing style. The discussions of the respective contribution to education studies of such complex theories as Althusser's ideology, Freud's concept of drives, Klein's projective identification and Lacan's subjectivity, are written in a clear and readable style. This achievement is worth noting given that social-psychological theory is a field in which an obtuse and difficult style, sometimes verging on total unreadability, is often confused with theoretical complexity. So given the author's intentions, and the combination of theoretical sophistication and stylistic competence, does the book succeed in making an original theoretical position?

The first chapter argues for a critique of the inadequacies of critical educational studies. Appel claims that the theoretical gap surrounding the intricacies of socialisation result from that discipline's lack of an explicit theory of human socialisation. In neglecting human motivation educationalists of the Left have ignored that 'the self (the inside) and the social (the outside) are two sides of the coin of subjectivity'. (Indeed, such sociologists and psychologists are sometimes able to co-exist in education departments with surprisingly little theoretical interaction.) Appel also criticises the inability of education studies to pursue both Wexler's social psychology of education and Bernstein's concept of codes of structuring pedagogic discourse in
terms of the ways in which the ideological determination of power inequalities frame ideological subjects. (I would add that, in New Zealand, Roy Nash’s important family resource framework suffers a similar fate—also a consequence of the inadequacies that characterise the critical sociology of education.) Despite the grand emancipatory objectives of critical education studies the discipline has failed to develop an alternative liberating perspective, settling instead for tirades against social inequalities and inadequate explanations of their generational persistence, but unable to elaborate a social psychology of change. The author takes upon himself the Herculean task of remedying this theoretical lacuna with the introduction of psychoanalytical concepts and a theory of ideology-in-general that builds on Althusser’s work. Importantly, the method of referring to the many ways in which psychoanalysis and sociology can be associated is introduced early in the book and referred to constantly as the argument is painstakingly and thoroughly developed.

Stephen Appel contends that the theory of ideology (understood in its Gramscian class character) operates at the level of the unconscious. This concept provides the argued link between Marxism and Freudism. Rather than a contrived integration of the disciplines. However, Appel (wisely) establishes the link in a less ambitious but more useful way, by juxtaposing some of the most interesting and relevant concepts from psychoanalysis in order to develop critical education studies’ thinking about social dynamics. The looseness of the integration does not detract from the coherence of the parts nor from the overall argument, but rather, creates a mood of exploration. The book’s structure is built up by the overall purpose of the argument and by the continuity of a historical overview of the major theorists, from Freud, then Althusser, Klein, Ogden, Lacan, through to the contemporary thinkers; Kovel, Zizek, Wexler, Bernstein, Castoriadis among others, integrated in original and fascinating ways.

The account of Freud’s sociological writings and Althusser’s model of structural causality establishes the frame of reference for the later discussion of Wexler’s request for a social psychology of classes, one that can investigate the differential relations between institutional and self-formative processes. The thorough examination of Althusserian ideology anticipates the later discussion of Bernstein’s theory of codes and the positioning of subjects through power relations. Appel argues that the principle of social transformation is present in Althusser’s model; residing within the ‘arbitrary and antagonistic construction of the structure itself’. This concept of antagonism is pivotal to Appel’s claim that Althusser provides a powerful way of theorising cultural reproduction.

In arguing that Althusser has been largely misread, Appel sets out a case for Althusserian ideology-in-general (this is ideology as the lived relation, lived experience, social practices) as a concept wholly amenable to psychological development. The ideological interpellation of subjects is proposed as a model around which a sophisticated theory of identity formation (or subjectivity) can be built. This interpretation of Althusserian ideology sees people not as the misled dupes of ideology as false consciousness, but as subjects interiorising sets of meaning and practices that determine their very consciousness. With the Althusserian organising principle that ‘ideology interpellates individuals as subjects’, the author makes the link from
Freud's unconscious drives to the mechanism of projective identification developed by Klein, Ogden and the object relation theorists to explain the way in which intersubjectivity occurs. Suggesting that projective identification is a promising conceptual bridge between psychoanalysis and sociology, linking the intrapsychic and interpersonal, Appel uses Lacan's theory of 'misrecognition' to link projective identification to Althusserian ideology. This crucial link between projective identification—the earliest form of empathy and symbol formation—and ideology is made possible by interpreting Althusser's ideology-in-general as a representation, not a reflection, of the imaginary relationship of individuals to their real conditions of existence. Importantly for this reading of Althusser, the 'imaginary' is Lacan's misrecognition, not false consciousness.

Interpellation is the process of contradictory subject positioning, responsible for the subsequent ambiguities and ambivalences that create the individual's internal world. The role of projective identification in the interpellation process is also thoroughly established with detailed descriptions of Klein's development theory and the concepts of internalisation and externalisation, through to the concept of projective identification and its subsequent elaboration by Ogden. Appel suggests that projective identification mechanisms could be used to study group interactions in education since this mechanism is the activation of internal objects in the recipient and is basic to all human interactions from the beginning of life—and includes the teacher-student interaction as symbolic meanings are generated between projector and recipient in all classroom interactions. In the attempts to develop a theory of transformative change, Appel claims that projective identifications offers a real possibility of conceptualising how specific changes in the feeling state and self-representations of another person actually occurs.

This approach rejects attempts to reduce human experience to the social and the purely reproductionist account of socialisation that tends to dominate the critical sociology of education. A lengthy description of Lacan's theory of subject formation (from Freud's decentred, lacking subject) is used to demonstrate his contribution to the formation of a subject that is formed on the basis of an imaginary relationship to itself and others. The movement of the subject from fragmentation and insufficiently to illusory unity provides the important element of Althusser's ideology-in-general, that is, the misrecognised, imaginary self. Here, Appel criticises ego-psychology with its principle of a core, biologically given ego (and the numerous therapeutic attempts to strengthen this ego), along with subjectivity theorists such as Bronwyn Davis, who, according to Appel, miss the dynamic role played by lack and desire in Lacanian theory. He also criticises the inadequacies of those neo-Marxist writers such as Anyon, who misinterpret ideology as false consciousness, but who have a dominant influence in the critical sociology of education.

Having established the contribution made by the major theorists: Freud, Althusser, Lacan, and others, to his theoretical exploration, Appel then moves on to his own original and extremely interesting contribution to the field. Arguing that the 'Imaginary' is something more than signification and meaning (the focus of most Lacanian theorists), Appel suggests that this realm of identity formation involving the interactive experiences of need, demand, desire, lack, fragmentation and illusory
unity in the projective identification process, is a domain of culture that is non-ideological and non-discursive. Foucault, Ogden and Kristeva are used to support this ‘undeveloped theory’. ‘Foucault has demonstrated that social power can act upon the body without first being mediated by consciousness.’ For Ogden ‘the primitive edge of experience’ is based largely upon physical contact and preverbal bodily sensation. By developing the pre/nonverbal part of Lacan’s work, Appel suggests that Kristeva’s work provides a way to transcend the fixation on ideology-critique in educational studies.

Stephen Appel’s post-Althusserian theory takes the necessary failures of ideology-in-general (that is, social interaction) to their starting point in the nature of desire. Psychoanalytical theory can offer a concept of human change that would benefit many disciplines by incorporating desire that arises out of the human condition of lack as the motivating dynamic of transformation. The author succeeds in bringing together his highly complex yet skilfully argued discussion by theorising the social field of human interaction as an ideological field in which the lacking and desiring subject is positioned as a coherent individual through the mechanism of projective identification. Here, according to Appel, is the missing link in educational theory, a means by which social change can be understood from the intrapersonal as well as the interpersonal perspective.

Appel refers to theorists such as Kovel, Wheelis, Zizek, Mouffe and Laclau in a final discussion of how the theory of the psychic economy of subjectivity might be developed. Emphasising the importance of the pre-Symbolic centrality of drive and desire, the author insists that social change is, in the end, a matter of depth psychology. He criticises the failure of educational sociology to consider the sequence of identity formation and the assumption that classes are pre-existing entities. Drawing on Kovel’s interpretation of Marx’s that the ability of human beings to labour is a universal trait whereby the self continually seeks to transform itself and the world, an impulse driven by desire, Appel inserts desire as part of the reality transformed by praxis. Through work, both the external and the internal are transformed. This is the emancipatory character of change that Appel considers is missing from the critical sociology of education.

Affinities are drawn between Althusser’s and Gramsci’s concepts of ideology and Freud’s psychic model. Althusser’s Marxism is drawn into the discussion through a brilliant discursion into the practice of human labour as the transformative moment thereby explaining how Althusser’s ‘theoretical anti-humanism is not really anti-human nor anti the real struggles of real humans’. Despite Appel’s original exploration into the Marxism-Freudian link, he recognises that this exploration leaves unresolved the crucial question: What is the relation between the nature of ideology and class domination?

The book concludes with a reading of Zizek’s political Lacanianism and a discussion of the contribution of Laclau and Mouffe to the theory of an economy of subjectivity. Contending that poststructuralism missed the point in celebrating differences per se, by missing the antagonisms that give rise to differences, Appel draws upon Zizek to argue that what distinguishes ethnic subject positions is not the different content of their symbolic identification but that universalism is resisted by
the ‘particular structure of their relationship to enjoyment’. Drawing upon a range of major theorists and grounding their contributions in Althusserian theory, Appel argues that ‘the specific instances of projective identification produce subjectivities in antagonistically structured space’. Power is something that operates internally, in acts of decision and social practices rather than a reified power that acts upon subjects.

Appel contends that the foundation of identity on fundamental structural splits is not new to the postmodern world. However, understanding this subjectivity principle is crucial for educational studies because schools are places for making the core meaning of self or identity among young people as all spaces are places in which society is not merely represented but constituted. It is this nature of the social as uncompleted that is the hope for emancipatory transformation. Appel’s argument for a theory of socialisation that includes transformation is extremely important for educational theorists whose influence on theoretical movements in education seems sometimes to overlook the pedagogic relation between teacher and student that Wexler describes as a ‘quintessential social relation where emotional commitment and caring are required for success’. Appel argues: ‘The workings of projection and projective identification may have particular value in the analysis of interpersonal behaviour in large groups’ and that ‘these mutual projective processes alter not only the self but also the behaviour of the world towards the self.’

So does this book succeed in making explicit a theory of socialisation that draws psychoanalysis and critical sociology into a useful alliance for educationalists? I think that it does—in original and important ways. It opens up a way for educationalists to approach learner consciousness from the ‘inside’. Critical sociologists tend to regard transformation as something that comes from the ‘outside’ through strategies such as Fisk’s tri-cornered dialogue (1995), a process involving the teacher, the student and their peers with the purpose of ‘slackening the negative side of consciousness’ (1995, p. 14). Appel’s psychic economy of subjectivity places individual transformation at the centre of social change, yet at the same time recognises that the individual is, paradoxically, the socially constructed subject positioned within the ideological relations that shape change. Most importantly, this book restores the teacher-student relationship to the centre of the learning process, in its recognition that real change occurs within social relationships that affect the protagonists in profound ways. Rather than describing the importance of social interaction as a crucial component of motivation, learning and change, this book theorises how interaction acts as transformative dynamic.

Reference

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This is an absorbing if perplexing volume. While meticulous in its argument and scholarship, it also seems narrow in its subject matter and appeal. The audience for its interdisciplinary inquiry, or 'fruitful inquiry into divergent beliefs', namely theology and pragmatism, might on the one hand seem limited. In terms of current offerings of Humanities studies, especially in Australia, it might also be tempting to regard the book as marginal or idiosyncratic, in its systematic argument for an account of immortality based on closed exegesis of the writings of William James. Eugene Fontinell assumes the relevance of these 'divergent beliefs'—his only apologia is for correspondence, within James's empirical conception of the self, for an understanding of the immortal self that is compatible with a transcendental Catholic belief.

One solution to any sense of narrowness, or lack, as far as an audience for this book goes, is to consider its potentiality. Pragmatism remains a misunderstood and overlooked account of mind, self, society and meaning, in terms of actions and material events. As derived from the work of James, Mead, Dewey and Peirce, it is quite sceptical in its response to many traditions of philosophy, culture and political theory. Fontinell claims correspondence between pragmatism and Judaic Christian beliefs on self identity and the body, and in terms of any contemporary, emergent pragmatic studies this claim must be held as pertinent and even significant. There is no doubt that the main pragmatic 'philosophers' all addressed religious phenomena, and sought to explain spiritual experiences in terms of an extended account of an 'empirical' self.

Yet by not addressing broader issues of pragmatism and religion, and representing various Christian and even non Christian positions, Fontinell does not fully critique the 'transcendental' and non-material account of an immortal self—at least he does not represent wider views of resurrection and the body. That is, the interdisciplinary 'dialogue' only partly refreshes theology, and can be seen finally to act as a one-way revisionist reading of pragmatism from one position of Christian theology. This is evident in the main division of chapters: the second part, titled 'Personal Immortality: Desirability and Efficacy', provides a theological discourse that comprehensively and confidently includes James alongside references to selected other theologians and philosophers. This second part locates the close study of James given in the first, within a preferred theological model. To say this may sound unfair to a book that seeks a 'pragmatic processive model', yet in view of its selective interpretation or omission of some themes of 'radical empiricism' that could impact on Christian belief, including the potential for a theology of immanence in any 'theory' of action (a potential that I will consider later), it is criticism that can be made.

To question the content of this interdisciplinary dialogue is not to undervalue its quality at all. The thoroughness and elegance of the exegesis of James provided by...
Fontinell is impressive, even exciting. Indeed, this book is masterfully written, and a pleasure to read, at the very least in order to refresh our appreciation of the erudite speculative pragmatism of a writer such as James. Significantly, it helps foreground inquiry into religion, and specifically Christian belief, that were present in all the early pragmatists, but have been commonly overlooked by secondary scholarship.

Nevertheless, the combination of Christian apologia and contemporary strategies of textual exegesis proves problematic. Fontinell does not claim that 'James ... consciously or deliberately constructed a field doctrine' (p. 77) of self: yet it is by means of a field theory that James's elaboration of an empirical self is interpreted in a way compatible with an account of immortality. The interpretive process involved in the copious 'selection' of James's writing is admitted from the first page of the preface onward: the book is written in 'the spirit of James', using James as a 'resource' (p. xii); it will 'utilise language and ideas' in its own argument for 'development of a self open to the possibility of personal immortality' (p. xi). Yet the result of its method of 'direct explication', direct quoting and attribution (the repetitive 'James says' or its near equivalents) can confuse the contemporary, interpretive voice of Fontinell, and the historical one of James. Despite constant efforts to stress where these do and do not coincide ('James and I'), the seamless elegance, volume and authoritativeness of exegetical evidence on which its argument is based, makes its argument sometimes hard to question, or invalid from a Jamesian perspective.

Such confusion, of exegesis and hermeneutic, of intention and interpretation, of author and reader, is commonplace in 'readings' of traditional philosophers, including the main pragmatic writers such as Peirce. I raise the issue here because a contemporary theological/pragmatist discourse is challenging enough to warrant a more unequivocal contemporary voice and perspective—with less reliance on 'direct explication', and within which an interpretation of James can be explicitly appropriated rather than implicitly 'interpreted'.

However persuasively and meticulously they may be put, the conclusions about an immortal self do need to be critiqued from a pragmatic perspective. Two issues can be raised.

Firstly, as part of what James termed a 'radical empiricism', Peirce, Dewey and James all elaborated an inquiry about self commencing with, in their early writings, an instrumental or indicative view of the body, language and identity. Peirce, from whom James undoubtedly if indirectly learnt a lot, articulated a multi-dimensioned view of self through his three semiotic categories, and various sub-types of action, perception and experience, understood as semiosis. The relationship of the 'lived' or symbolic, and the physiological body, remained a constant theme in all writers, a theme which Fontinell well addresses, even if selectively and mainly in terms of his own argument (p. 80).

Speculation on multiple experiences of selves responded to questions of philosophy, and was articulated using traditional terms such as 'consciousness', 'mind', 'intention', 'singularity', and even the term 'self' itself. Yet there is a danger in taking these terms of discourse too literally or traditionally, and missing the inflection, even irony, placed on them through their appropriation in pragmatist discourse. Fontinell
focuses on Jamesian terms such as ‘wider consciousness’, seeking to find limits of a foundational pragmatism that is consistent with a non-material, immortal or unconscious account of the self.

Yet however elaborate the understanding of experience became—and however labelled by James and others as ‘musing’, ‘liminal’, ‘stream of consciousness’, ‘playful’ or ‘abductive’—experiences remained ‘cognizable’ and perceptual, attributes of ‘felt life’ and being as part of an external, material world. Fontinell demonstrates faithful reading of multi-dimensionality or multiplicity of self in pragmatism, and seeks to delineate these in the ‘processional-relational’ nature of fields—but he then proceeds to seek principles of spiritual or higher, ‘macro’, transcendental or ‘cosmic’ consciousness that will organise, hierarchise and centre these different experiences.

Post-structural reading of pragmatism see principles and correlatives of epistemological and textual difference present in accounts of self by Peirce and James. That is, the conception is of a fundamentally unstable and disorganised self, that can only be unified in a radical and paradoxical understanding of apparent contradictions—of singular/general, subjective/objective, body/mind, actual/possible, discontinuous/continuous, simple/complex, immediate/distant. With Fontinell, it is almost as if the conceptual limits of pragmatism correspond with a limit of interpretation of ‘radical empiricism’ set by the Christian apologia or revisionism being attempted.

Theologically speaking, the view of action, perception and identity as being fragmented not just several times, but, as Deleuze (1986) says (and Peirce intimated) to an ‘nth degree’, seems more compatible with an account of immanence than transcendence. James’s different ‘varieties of religious experience’ and ‘multiplicity of self’, along with the total ‘flux’ and ‘data’ of life, are distributed rather than unified or organised in any holistic sense. An account of ‘total experience-process’ and ‘wider consciousness’ occurs through understanding of the minute fabric and ‘stream of consciousness’. Immanence and spiritual awareness is found in the gaps, margins, intervals and discontinuities of everyday action and perception. In the minutiae and details of behaviour are found qualities of continuum, infinitude and complexity of lived experience. Pragmatism seems more compatible with a theology of immanence—of the spiritual found within the everyday—rather than seeking, as Fontinell does (and Hausman (1993) did for Peirce) to read all James in terms of an open inquiry into transcendentalism to be found in both of their latter writings. A theology of immanence has been foreshadowed in the pragmatic studies of Gilles Deleuze (1986) and his response to Peirce—a direction that is arguably of considerable contemporary interest.

Secondly, parallel to any elaboration of a concept of self (or ‘multiplicity of self”) by early pragmatists, went speculation about the nature of society, education, communication and the community. Fontinell address this topic right at his book’s end (p. 215)—and it is true James’s pragmatism remains more individualised than that of Dewey, Peirce or Mead. It might seem unfair to ask for wider perspectives in theology or pragmatism than James supplied, but wider perspectives is exactly what Fontinell undertakes in his ‘dialogue’, however disguised it might become by close ‘extensive explication’. He is as much concerned ‘with others’, including
Dewey, as with James, in the formulation of his argument about self. Therefore it is reasonable to expect that themes of self and society, of interaction and communication, would be addressed, especially as part of any contemporary synthesis of theology and pragmatism. Perhaps this criticism is more an editorial request, for wider interdisciplinarity, in which Christian theology can be explored more as a possibility or outcome of a foundational pragmatism, in the 'true spirit' of the early pragmatist approach to all belief.

Theologically, any discussion of community opens into Pentecostal, Trinitarian (the third person) and ethical themes, and perhaps those of physical resurrection, the latter strangely omitted by Fontinell. Whether thoughts on the church were approached from a Catholic or Protestant, or entirely contemporary perspectives, it would allow conception of self to occur in a historicist perspective, aided by tools and media of reasoning and communication. Within a historicist perspective, themes of personal health, and the quality and longevity of life, in this and any other life, can also be addressed.

Any critical comments of this review are meant to be sympathetic, and in the spirit of dialogue that provides an aim for this book. If the criticisms seem strong, then they assume a wide, emergent potential audience to which they can be addressed. As a one-off publication, _Self, God and Immortality_ can appear narrow, and be vulnerable to even harsher criticism from unsympathetic readers. Yet as one of a genre of present and likely works in contemporary theology and pragmatism, it is to be welcomed. It foregrounds themes about religion explicit in early seminal philosophical writing, and demonstrates to a large degree ongoing interest and relevance of these themes for contemporary inquiry.

**References**

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