

Review of *Knowledge and Knowers: Towards a realist sociology of education* (2014) by Karl Maton. London and New York: Routledge

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Maton's book charts the evolution of aspects of Legitimation Code Theory (LCT), from its roots in Bourdieu's field theory and Bernstein's code theory, to the multifaceted toolkit for the understanding of social practices that it currently offers. Maton describes LCT as a "practical theory rather than a paradigm, a conceptual toolkit and analytic methodology rather than an -ism" (p.15), providing the means for "analyzing actors' dispositions, practices and contexts within a variegated range of fields" (ibid). Maton's goal is to address the issue of 'knowledge blindness' in educational research by developing awareness of knowledge as having existence beyond discourse, with distinctive emergent properties and real effects. He builds a convincing argument that there has been inadequate attention to the nature, structure and effects of types of knowledge, hence the need for a sociology of knowledge and its possibilities and effects. LCT thus locates itself within a social realist paradigm, challenging what Maton argues is a false dichotomy between relativist constructionism and absolutist positivism.

Chapter One provides a schematic outline of the whole of LCT – sketching the five dimensions of Autonomy, Density, Temporality, Specialization and Semantics. Each of these excavates a particular set of generative principles underlying social practices within fields. The overall focus of the book, however, is on the dimensions of Specialization and Semantics. Each of the following chapters focuses upon a key concept within these dimensions, explicating it through discussion of case studies. Chapter Two explains the nature and purpose of languages of legitimation – the principles organizing actors' practices and claims of legitimacy for what they are doing. For knowledge claims these are realised in terms of epistemic relations (between knowledge and its proclaimed objects of study) and social relations (between knowledge and its authors or subjects). In configuring these relations as intersecting continua moving between stronger and weaker forms, Maton generates a Specialization plane, identifying four codes: elite, knower, knowledge and relativist. The strength of this approach is in its avoidance of binary typologies in favour of a topological space enabling infinite plotting of shifts within, as well as between codes. Maton illustrates this with discussion of the development of Cultural Studies within British universities.

The epistemic-pedagogic device (EPD) is the focus of Chapter Three, explained as an extension of Bernstein's pedagogic device. It is the means of addressing the gap in Bourdieu's accounts of fields through attending to how the unfolding network of potentials

making up a field is produced, sustained, and changed. Bernstein clarified three key contexts critical for the creation and transmission of knowledge within society: fields of production, fields of recontextualisation and fields of reproduction. Maton's specific contribution is to add selectively to the model by taking out and extending one key component – arena – to deal with questions of the nature of the ground for which people contest. While the EPD is the object of contestation, specialization codes are the means for contestation. How fields are organized is what is being struggled over. Maton explores how his notion of specialization codes provides the means to analyze the consequences of the EPD on practices. A significant development is Maton's shift in reconceptualising Bernstein's distributive rules as distributive logics and establishing their reach across the whole arena. This avoids problems of understanding practices as deterministically rule governed. The model highlights the need for concepts providing the means to analyse practices across all three fields and the dispositions/habitus actors bring to arenas.

Chapter Four explores knowledge and knower structures in relation to their underlying formations in order to achieve better understanding of the ways knowledge practices specialize identity, consciousness and relations. Maton's goal in this chapter is to demonstrate the applicability of the concepts of knowledge-knower structures to analyses of both intellectual and educational fields. His exemplar in relation to intellectual fields is the 'two cultures debate' sparked by C.P. Snow in 1959. In the educational field he tracks shifts in the specialization coding of school music from knower to knowledge to elite codes across different levels of the English school system.

The issue of how change happens in humanities fields, and the spectrum of different types of knower gazes is the focus of Chapter Five. Here Maton explicates the concept of 'sociality' in relation to how horizontal knowledge structures develop through the integration of knowers. He also clarifies the relationship of these notions to specialization codes, by emphasizing that all social fields always comprise both knowledge and knower structures. Variations arise through the relative differences of strengths of these relations. Differences in gazes are linked to varying strengths of social relations, plotted along a continuum from weaker to stronger social relations: trained, cultivated, social and born. Cultivated gazes, which arise from shaping legitimate dispositions in actors, are argued to offer the greatest possibility for the integration of new knowers. This is explored in relation to shifts in British Cultural Studies from a dominantly cultivated gaze towards increasing dominance of social gazes. The latter are argued to lead to a proliferation of separate knower hierarchies.

Chapters Six and Seven focus attention on the Semantics dimension of LCT and address the issue of how cumulative learning can be promoted. Maton argues that in educational fields where segmented knowledge predominates, it is difficult for new ideas and approaches to be integrated with extant knowledge. The resultant segmented knowledge restricts explanatory strength and cumulative advancement in research. Maton develops the notion of semantic gravity as a key organizing principle underpinning different types of educational knowledge

which captures the extent of context-dependence of meaning. He illustrates application of the concept through two case studies, the first examining university student work on ‘authentic’ learning in professional education. The second looks at high school English essays produced out of a thematic study unity. This provides a rich illustration of how LCT concepts can be fruitfully applied to issues of language education practice.

Development of understanding of the play of semantic density arose from inter-disciplinary work with systemic functional linguistic scholars, leading to questions of how linguistic features such as grammatical metaphor are realized in knowledge practices. Semantic density refers to the extent of condensation of meaning within socio-cultural practices. The strength of semantic density links to the nature of the semantic structure in which it is placed – that is, the multiple possible networks of meaning. Again, Maton directs attention to shifting relative strengths, rather than static binary types. In combination with the semantic gravity continuum, the relative strengths of each can be independently tracked, enabling topological mapping of differences within, as well as between, quadrants. Through comparison of Bourdieu and Bernstein’s theories, Maton demonstrates the stronger semantic density of Bernstein’s concepts. He links this insight to processes of cumulative learning, arguing that Bourdieu’s work, despite being strong, nuanced and provocative, offers less theoretical forward driving than Bernstein’s. With code theory each distillation of principles stimulates further questioning of what creates those principles, indexing theorizing yet to come at deeper levels of generality, abstraction and condensation.

In Chapter Eight Maton develops a cosmological metaphor to explore how belief systems underpin the means whereby actors choose and organize clusters and formations of position that establish what is seen as ‘possible and legitimate within a field’ (p.149). Ideas from Specialization and Semantics are fused to distinguish epistemological and axiological types of condensation, accounting for positions that are suffused with meanings that are variably charged with legitimacy. He elaborates this by highlighting two main dimensions embracing the four Cs of cosmological analysis: clustering and constellating (of internal relations) and condensing and charging (of external relations). These ideas are exemplified through his tracking of how student centred learning became positively charged in educational research in the 1990s in relation to the negative charging of teacher centred learning.

The question of how to conceptualize the form and effects of variations inside gazes is the focus of Chapter Nine. Maton sketches a model for thinking about internal differences and shows that highly nuanced distinctions can have significant consequences. He conceptualizes shifts in lenses. With respect to epistemic relations he argues practices can be specialized by what they relate to (ontic relations) and how they relate to other possible practices (discursive relations). From this he generates an epistemic plane (insights), identifying four types of insights: situations, doctrinal, purist and knower. As exemplar he looks at the field of linguistics, which he identifies as a knowledge code field. In terms of insights, he sees Chomskyan approaches as theory driven in the selection of foci and exempla. By contrast, in

systemic functional linguistic approaches, phenomena propel the advancement of theory. He advances claims as to the gains and costs of each type of insight. With respect to social relations knowledge practices are distinguished in terms of interactional relations, focusing on knowing practices, and subjective relations, focusing on categories of knowers. This generates a social plane with the four types of gazes already introduced in Chapter Five. He uses these to account for clashes within the field of Cultural Studies in the 1970s, characterizing these as social relation clashes between cultivated and social knower codes. He concludes the chapter with attention to variations in lenses, that is, kinds of gazes and insights. He draws together a range of his insights in a '4K model'. Knowledge practices are analyzed in terms of both social relations (interactional relations focused on knowing; subjective relations focused on knowers) and epistemic relations (ontic relations focused on the known; discursive relations focused on types of knowledges). This offers tools of refined conceptual delicacy, illuminating how specialization codes offer more than dichotomous types, enabling tracing of variations and shifts in knowledge practices over time within particular modalities.

The final chapter 'Building a realist sociology of education' draws prior threads together and points forward, both in terms of issues for theoretical development, and new directions for empirical research. Maton foregrounds the dynamic relationship between the two, with further issues arising from substantive empirical studies leading to creative development of the theory. Maton takes pain to emphasize

- a) that LCT is an ongoing, dynamically evolving theory,
- b) that *Knowledge and Knowers* addresses only two dimensions of the LCT framework that provides a toolkit for studying practice, and
- c) the contribution of the research of many others to the further development of LCT.

While LCT is a complex, densely multi-faceted framework, it is well worth engaging with, offering a flexible theoretical framework that provides a shared meta-language for engaging with issues of social practice, including language. With his lucid writing Maton provides an accessible entry point to sociological frameworks with strongly illuminating potential for the insightful investigation of issues within the field of language and education. The dimensions of Specialization and Semantics provide discriminating conceptual tools that have been translated into both quantitative and qualitative external languages of description. In terms of South African language education suggestive research possibilities would include:

- the nature of the specialization codes embodied in our language curricular, across the various home and additional languages, at different levels of the educational system;
- the tracking of pedagogic practice in terms of both the Specialization and Semantics dimensions, seeking comparative understanding of similarities and differences in how knowledge is worked with between teachers of the same language, across a variety of contexts and between teachers of different home languages;

- tracking the extent of code matches and mismatches between official and implemented curricular, teachers' and learners' dispositions towards the teaching and learning of specific languages across various contexts.