Edited by Frances Christie Karl Maton

Disciplinarity

Functional Linguistic and Sociological Perspectives



Disciplinarity: Functional Linguistic and Sociological Perspectives

Edited by Frances Christie and Karl Maton



Continuum International Publishing Group

The Tower Building 80 Maiden Lane

11 York Road Suite 704

London SE1 7NX New York, NY 10038

www.continuumbooks.com

© Frances Christie, Karl Maton and contributors 2011

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system, without prior permission in writing from the publishers.

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

ISBN: 978-1-4411-0885-2 (hardcover)

Library of Congress Cataloging-in-Publication Data

A catalog record for this book is available from the Library of Congress.

Typeset by Newgen Imaging Systems Pvt Ltd, Chennai, India Printed and bound in Great Britain

Contents

| Not | tes on Contributors | VII |
|-----|---|-----|
| 1. | Why Disciplinarity? Frances Christie and Karl Maton | 1 |
| Par | rt I: Theorizing Disciplinarity | |
| 2. | Through Others' Eyes: The Fate of Disciplines Johan Muller | 13 |
| 3. | Bridging Troubled Waters: Interdisciplinarity and What Makes it Stick J. R. Martin | 35 |
| 4. | Theories and Things: The Semantics of Disciplinarity <i>Karl Maton</i> | 62 |
| Par | rt II: Building and Breaking with Disciplinarity | |
| 5. | Making the Break: Disciplines and Interdisciplinarity <i>Rob Moore</i> | 87 |
| 6. | Writing Discipline: Comparing Inscriptions of Knowledge and Knowers in Academic Writing Susan Hood | 106 |
| 7. | Absenting Discipline: Constructivist Approaches in Online Learning Rainbow Tsai-Hung Chen, Karl Maton and Sue Bennett | 129 |
| 8. | Discipline and Freedom in Early Childhood Education Susan Feez | 151 |

vi Contents

| Part | III: | Disci | plinarity | in 7 | Subi | iects |
|--------|------|-------|------------|------|------|-------|
| I ui t | TTT. | DISCI | P1111411t, | | Jun | CCL |

| 9. | Disciplinarity and School Subject English Frances Christie and Mary Macken-Horarik | 175 |
|-----|---|-----|
| 10. | Supporting Disciplinary Learning through Language Analysis: Developing Historical Literacy Mary J. Schleppegrell | 197 |
| 11. | The Semantic Hyperspace: Accumulating Mathematical Knowledge Across Semiotic Resources and Modalities Kay L. O'Halloran | 217 |
| 12. | Social Studies Disciplinary Knowledge: Tensions between State Curriculum and National Assessment Requirements Beryl Exley and Parlo Singh | 237 |
| Ind | ex | 257 |

Chapter 1

Why Disciplinarity?

Frances Christie and Karl Maton

Disciplinarity is dead! Such is the thrust of pronouncements often heard across the humanities and social sciences. The notion of academic disciplines is said to belong to an earlier age and a simpler world. Accelerating rates of scientific and technological innovation, increasingly globalized flows of knowledge, people and capital, evermore hybridized cultures, proliferation of new information and communication technologies and growing fluidity in employment are among many changes portrayed as harbingers of fundamental transformations in the social landscape. This new age is then held to require new ways of structuring the intellectual and educational landscapes. Disciplinarity was, so the commonly heard story goes, suited to past social forms but is now outmoded and quickly becoming supplanted by 'inter-', 'cross-', 'multi-', 'trans-' or 'postdisciplinarity'. The spread of new technologies, for example, is said to be democratizing the creation of knowledge, undermining traditional notions of scholarly authority and thereby dissolving boundaries between disciplines and the world beyond academia. As well as being described as outdated, 'disciplinarity' is typically constructed as reactionary and conservative, while 'interdisciplinarity' is viewed as progressive and egalitarian (see Chapter 4, this volume). Why, then, engage with disciplinarity? Are attempts to explore disciplinarity not outdated before they have begun? Is this not simply a hankering for the past? Far from it. For disciplinarity is far from dead, although the nature of disciplinarity - what it means to be 'disciplinary', 'interdisciplinary' or even 'postdisciplinary' - remains largely undertheorized.

Alongside calls to abandon disciplines, a more measured reconsideration of disciplinarity is gathering pace that highlights its continuing relevance. A series of essays collected in *Disciplinarity at the Fin de Siècle* (Anderson and Valente 2002b), for example, focuses on intellectual fields during the late Victorian era, a formative period for the emergence of academic disciplines. These essays challenge the idea that disciplinary formation involves merely constraint and ideological support for the status quo and undermine the 'comfortable

pessimism of Foucauldian scholars' (Anderson and Valente 2000a: 9) who reduce disciplines to mere technologies of control; as the editors summarize:

if the tendency is now to associate interdisciplinarity with freedom, and disciplinarity with constraint, a closer look at the history of these disciplines shows that the dialectic of agency and determinism, currently distributed across the disciplinarity/interdisciplinarity divide, was at the heart of disciplinary formation itself . . . It becomes evident, then, that disciplinarity was always interdisciplinarity. (Anderson and Valente 2000a: 2, 4)

Similarly, McArthur (2010) argues that the tradition of 'critical pedagogy', exemplified by the work of thinkers such as Henry Giroux, unfairly portrays disciplines as closed, limiting and elitist while valorizing interdisciplinarity as complex, permeable and contested. From a different perspective, papers collected in Kreber (2009) explore teaching and learning practices 'within and beyond disciplinary boundaries' in the contemporary university. They highlight the need for these practices to take account of the specificities of disciplines and the value of students becoming participants in disciplinary discourse communities so as to be better prepared to grasp the complexities of current social change. These collections, by diverse groups of scholars, illustrate that reports of the *death* of disciplinarity have been *greatly exaggerated*. Indeed, in terms of 'disciplines and the future', Abbott (2002: 205) summarizes an emerging opinion 'that there is little new about current interdisciplinary ferment and that, absent major change in the social structure of the university, there is little likelihood that the disciplinary system will change much'.

To Abbott's conclusion we would add that there is still much to learn about that disciplinary system. For 'disciplinarity' is more often heard as a term (frequently of abuse) than explored as a phenomenon. Rather than analyse the basis of different forms of disciplinarity, the aim of much writing on the subject is, as the introduction to one collection declares, 'to deprivilege some traditional notions of knowledge' where 'what matters more than the concepts one employs or the particular disciplines one looks at is the critical attitude one employs' (Messer-Davidow et al. 1993: 3). This is not to say features of different forms of disciplinarity are never described. Gibbons et al. (1994), for example, describe a transdisciplinary 'Mode II' of knowledge production they influentially claim has emerged in terms of such features as 'reflexivity' and 'heterogeneity'. However, such accounts remain at a surface level of description, are often based more on assertion than research and lack a means of systematically being able to describe whether some forms of knowledge practices are more or less 'reflexive' or 'heterogeneous' (or whatever other defining features are described) than other forms. In short, the underlying structural principles of disciplinarity, which disciplines may realize in different ways at different times for different practices, are rarely excavated in depth.

The Rise of Debates over Disciplinarity

The lack of exploration into the bases of disciplinarity should be surprising, as they have been a preoccupation of intellectual debate for some time. As mentioned, the formation of modern disciplines during the late nineteenth century was accompanied by intense discussion over how the intellectual map should be drawn. More recently, the post-war period has been characterized by recurrent debates over disciplinarity. At this time several factors came together, at least in the Anglophone world, to create an environment in which existing ways of organizing the intellectual map came under increasing scrutiny. One such factor has been the massive expansion of education. Successive waves of growth resulting from recurrent raising of the school-leaving age and the creation of new tertiary institutions, have brought with them the prospect, if not always the reality, of new social groups entering higher levels of education. Each such expansion has seen debates over what Hickox and Moore (1995) term the 'expansion / accommodation' problem: what to do with the new kinds of students who are expected to be staying on at school or entering higher education. These debates have typically involved calls for the restructuring of the institutional and intellectual maps of education in order to provide new forms of education that, proponents claim, will better speak to the experiences and desires of these new students (cf. Maton 2004).

Alongside these social and demographic pressures, the intellectual map has been characterized by a recurrent loss of confidence in humanist disciplines over their status, social role and purpose. The rise of the natural sciences helped engender a 'crisis in the humanities' during the early 1960s (e.g. Plumb 1964) that, alongside the 'two cultures' debate between science and the humanities sparked off by Snow's famous lecture (1959), has been echoed in debates over the disciplinary landscape ever since. The resulting default setting in many subject areas in the humanities and social sciences has been that disciplinary boundaries based on delimited objects of study and specialized procedures are a form of scientistic positivism that does injustice to the multifaceted, meaning-making activities of actors in the human and social world. What then is required, it is argued, are forms of knowledge that aim to capture the richness of lived experience in all its contradictory complexity. This false dichotomy between positivism and hermeneutics has placed disciplinary knowledge on the side of scientism, and thence nostalgic, if not reactionary, conservatism. Disciplinarity has thereby come to be equated with a kind of intellectual straitjacket and with elite forms of thought and education that exclude the experiences of many groups in society. One result of the confluence of these social, demographic and intellectual factors has been recurrent calls to cast off the constraints of 'traditional' disciplines in favour of the greater 'freedom' and 'relevance' purportedly enabled by new practices. In higher education this helped provide conditions for the emergence of non-disciplinary 'studies', such as cultural studies and gender studies, during the 1960s and 1970s. In schooling, educational theory and curriculum planning had by this time come to embrace 'progressivist', later 'constructivist', notions of 'inquiry learning', 'process approaches' to teaching and learning and 'student-centredness', all of which were claimed to provide more 'relevant' experiences for students than existing forms of education. Their effect was to undermine the discipline base of school subjects, creating confusion and uncertainty about goals and compromising the notion of teacher authority (Christie 2004).

More recently, these calls to more 'relevant' forms of knowledge have been joined, in a partnership few proponents of anti-disciplinarity readily admit, by pressures created by economic rationality and increasingly utilitarian educational policies. For example, moves to make universities more responsive to economic needs are typically accompanied by calls to flexibilize the intellectual workforce by reducing the external boundaries of the academy and internal boundaries between disciplines. According to some commentators this 'Mode II' of knowledge production has already arrived; Limoges, for example, states:

We now speak of 'context-driven' research, meaning 'research carried out in a context of application, arising from the very work of problem solving and not governed by the paradigms of traditional disciplines of knowledge'. (1996: 14–15)

Whether at university or at school level, the most notable feature of these developments is that disciplinarity has regularly been the subject of intense focus in academic and policy thinking, yet it remains undertheorized. This volume aims to open up for discussion the character of disciplinarity, broadly understood as referring to the organization of knowledge and of intellectual and educational practices for its creation, teaching and learning. It does so from both disciplinary and interdisciplinary directions, drawing on one or both of two traditions that aim to make the forms taken by knowledge practices visible as objects of study: systemic functional linguistics and social realist sociology of education. Crucially, the chapters also explore what is at stake in disciplinarity: what disciplinary knowledge, theorizing and teaching and learning involve.

What's at Stake in Disciplinarity?

Writing in another, if related context, about 'democracy and pedagogic rights', Basil Bernstein (2000: xx) declared that the first condition for an 'effective democracy' is 'that people must feel they have a stake in society', where a 'stake' involves having something to *give* as well as to *receive*. There is a sense in which what's at stake in disciplinarity similarly involves people having something to, something to give and something to receive. Membership in a disciplinary

community offers shared, intersubjective bases for determining ends and means, approaches and procedures, ways to judge disciplinary findings, the bases on which to agree or disagree, and problems apprehended (if not always solved, since many require hard work and are at times intractable), as well as providing shared pleasures in intellectual pursuits and the excitements of possible new understandings emerging from jointly constructed knowledge of many kinds. This is to say, such communities offer not certainty of knowledge, as debate is a constant feature of disciplines, but rather the shared bases for debate, as well as for interdisciplinary dialogue. Participants in a community of scholars thus recognize the discipline which they also maintain and change, for they use it to build and shape knowledge: in this sense they both give and receive, in the many books, papers, face-to-face and email conversations, conferences and website connections they engage in as measures of their participation.

At times participants even manage in their activities to build new knowledge and think the hitherto 'unthinkable' (Bernstein 2000: 29). Thus disciplinarity can provide the basis for creativity, disruption of the known and change in our thinking.

To explore disciplinarity, we have organized this volume into three main sections. Part I theorizes disciplinarity, exploring the different ways the disciplinary map has been mapped in the past (Chapter 2), what enables interdisciplinary dialogue between approaches from different disciplines (Chapter 3) and the forms of theorizing that enable or constrain cumulative knowledge-building (Chapter 4). Part II addresses how disciplinarity is built and broken with, specifically how interdisciplinary work is in fact a routine aspect of, rather than a break with disciplinarity (Chapter 5), how different disciplines create different bases for their knowledge claims (Chapter 6), the effects of withdrawing disciplinary knowledge and pedagogy from students (Chapter 7) and how induction into knowledge can be fostered in schooling (Chapter 8). Finally, Part III explores various aspects of disciplinarity in a range of subject areas: English (Chapter 9), history (Chapter 10), mathematics (Chapter 11) and social studies (Chapter 12).

In exploring what's at stake in disciplinarity, the scholars collected in this volume highlight four key themes that resonate through all these chapters. First, a central dimension to disciplinarity is the capacity to build knowledge over time, both in terms of intellectual production and in terms of fostering and promoting the understanding of students. As Hood (Chapter 6) demonstrates when comparing two fields from the humanities and social sciences, and as Maton (Chapter 4) shows in an analysis of the theories of Pierre Bourdieu and Basil Bernstein in the sociology of education, different subject areas and approaches build their knowledge in different ways, some more effectively than others. In terms of school curriculum, Christie and Macken-Horarik (Chapter 9) explore the basis for subject English to integrate different approaches, so that students can build their understanding over time rather than experience

a series of segmented knowledges, as is the common experience in schools. They argue the importance of a subject that teaches a functional understanding of the language, its texts and contexts, systems and registers, all of which help develop capacities to critique, interpret, argue and appraise in ways valued in an English-speaking culture.

In terms of teaching and learning, as Feez (Chapter 8) argues, an apprenticeship into the various disciplines can start very early. Feez discusses the work of Montessori, who developed a pedagogy for early childhood, introducing children to practices associated with all the major disciplines: mathematics, science, language study, history, music and art. Hers was a principled pedagogy intended to apprentice the young into their cultures and contribute to a growing sense of self as participant. Schleppegrell for history (Chapter 10) and O'Halloran for mathematics (Chapter 11), also discuss how the learning of their respective subjects involves learning intellectual practices and ways of valuing that are fundamental to the nature of disciplines. In contrast, Chen et al. (Chapter 7) discuss what happens when the notion of discipline is absented, leaving students without goals and directions in a study programme based on constructivist principles that deny the very notion of disciplinarity. In complementary fashion, Exley and Singh (Chapter 12) demonstrate the problems that emerge in educational programmes that espouse constructivist and/or 'interdisciplinary' principles, creating irreconcilable conflicts in the assessment procedures that are pursued. In short, what all these chapters highlight is the centrality of cumulative knowledge-building to any understanding of what is at stake in debates over disciplinarity. They reveal how this is not necessarily a constraint but rather a launchpad for creativity and show that past work is not necessarily a dead weight lying heavily on the minds of the living but can be the basis for innovation and change.

A second theme is the significance of the interpersonal, in both disciplinary and interdisciplinary endeavours. For example, the chapters by O'Halloran, Feez and Schleppegrell all show how the role of the teacher is critical in fostering and promoting the learning of students through focused discussion of methods, procedures and ideas. Here too the study by Chen et al. reveals the problems that occur when this relation between teacher and student is removed because the teacher is largely absent, not because of the use of online media in the example discussed in the chapter, but because of the non-directive and non-guiding role the constructivist teachers assume in their teaching. These chapters all highlight how good pedagogy involves a dialogue that creates a sense of a socially rewarding involvement in an enterprise of mutual interest. This dialogue is also crucial in the creation of 'new' knowledge; as Randall Collins (2000: 7) argues, intellectual coalitions are 'motivated by the energies of social interactions'. In a reflexive account of relations between the two principal approaches brought together in this volume, Martin (Chapter 3) not only explores the characteristics of systemic functional linguistics and social realist sociology of education that have enabled such fruitful interdisciplinary engagement over several decades, but also highlights how interpersonal interactions among their protagonists have decisively influenced these intellectual developments.

A third and related theme concerns the sense of personal belonging that involvement with a discipline can bring. In universities we need the advantages of disciplinary and institutional identity as Moore (Chapter 5) argues in this volume, though the issue is equally important in the various professions beyond the universities, as Muller notes in his discussion of different ways disciplinarity has been accounted for (Chapter 2). We would argue that identification with a discipline is closely connected to one's sense of personal identity. One's subjectivity is in part bound up with one's discipline(s) – they help shape one's way of seeing the world through providing what Maton (Chapter 4) describes as a 'trained gaze' or a 'cultivated gaze', depending on the form taken by the discipline. Furthermore, a sense of one's own discipline can enable one to make sense of others' disciplines, making judgements about those with whom one might most productively seek alliances. For the purposes of schooling in particular, learning these things is part of the apprenticeship to be afforded students as they take even their earliest steps in learning disciplines.

A final major theme of the book concerns the interdisciplinary nature of much disciplinary work. Moore (Chapter 5) critically discusses claims that interdisciplinarity is new and involves fundamental changes to the organization of knowledge, distinguishing between what he terms 'hyper-interdisciplinarity' and the 'routine-interdisciplinarity' that already characterizes research in the disciplines. Disciplinarity and interdisciplinarity are, as the chapters in this volume show, not opposed but rather two sides of the same coin, two dimensions of knowledge formations that together enrich intellectual and educational practices. The autonomous, inward-looking face provides possibilities for cumulative knowledge-building, the generation of shared grounds for judgements and collective identities. The heteronomous, outward-looking face broadens intellectual coalitions and enables ideas recontextualized from other perspectives to refresh the ways of viewing and thinking about problems circulating within the discipline. Both these dimensions are well illustrated by Martin's account of the longstanding interdisciplinary dialogue and collaboration between the two approaches that others such as Hood, Christie and Macken-Horarik and Schleppegrell exemplify in their discussions.

The volume is itself part of this interdisciplinary endeavour, one that builds on an established and ongoing conversation between linguistics and sociology (e.g. Christie and Martin 2007). What enables such dialogue is, as Bernstein put it, allegiance to a problem and not just to an approach. As Martin, Muller and Moore all argue in various ways, this kind of interdisciplinarity, one that is an integral part of disciplinarity, is not only possible but desirable. Declarations of the death of disciplinarity are thus not only premature but also based on serious confusions about the nature of knowledge. This volume not only explores but also illustrates what it means to be *both* disciplinary *and* interdisciplinary.

Note

¹ For key social realist texts see the papers collected in Maton and Moore (2010), as well as Maton (2010), Moore (2009), Muller (2000) and Wheelahan (2010); see also Christie and Martin (2007).

References

- Abbott, A. (2002), The disciplines and the future, in S. Brint (ed.), *The Future of the City of Intellect*. Stanford: Stanford University Press.
- Anderson, A. and Valente, J. (2002a), Discipline and freedom, in A. Anderson and J. Valente (eds), Disciplinarity at the Fin de Siècle. Princeton: Princeton University Press.
- (eds) (2002b), Disciplinarity at the Fin de Siècle. Princeton: Princeton University Press.
- Bernstein, B. (2000), *Pedagogy, Symbolic Control and Identity: Theory, Research, Critique* (revised edn). Oxford: Rowman & Littlefield.
- Christie, F. (2004), Authority and its role in the pedagogic relationship of schooling, in L. Young and C. Harrison (eds), *Systemic Functional Linguistics and Critical Discourse Analysis. Studies in Social Change.* London: Continuum.
- Christie, F. and Martin, J. (eds) (2007), Language, Knowledge and Pedagogy: Functional Linguistic and Sociological Perspectives. London: Continuum.
- Collins, R. (2000), The Sociology of Philosophies: A Global Theory of Intellectual Change. Cambridge, MA: Harvard University Press.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. and Trow, M. (1994), *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies.* London: Sage.
- Hickox, M. and Moore, R. (1995), Liberal-humanist education: The vocationalist challenge. *Curriculum Studies* 3(1): 45–59.
- Kreber, C. (ed.) (2009), The University and its Disciplines: Teaching and Learning Within and Beyond Disciplinary Boundaries. Abingdon: Routledge.
- Limoges, C. (1996), L'université à la croisée des chemins: Une mission à affirmer, une gestion à réformer, *Colloque Le lien formation-recherche à l'université: Les pratiques aujourd'hui*. Quebec: Association canadienne-français pour l'avancement des sciences et le Conseil de la science et de la technologie et le Conseil supérieur de l'education, 7–32.
- McArthur, J. (2010), Time to look anew: Critical pedagogy and disciplines within higher education. *Studies in Higher Education* 35(3): 301–315.
- Maton, K. (2004), The wrong kind of knower: Education, expansion and the epistemic device, in J. Muller, B. Davies and A. Morais (eds), *Reading Bernstein, Researching Bernstein*. London: Routledge.
- (2010), Knowledge and Knowers: Towards a Realist Sociology of Education. London: Routledge.
- Maton, K. and Moore, R. (eds) (2010), Social Realism, Knowledge and the Sociology of Education: Coalitions of the Mind. London: Continuum.

Messer-Davidow, E., Shumway, D. and Sylvan, D. (1993), Introduction: Disciplinary ways of knowing, in E. Messer-Davidow, D. Shumway and D. Sylvan, (eds), *Knowledges: Historical and Critical Studies in Disciplinarity*. Charlottesville: University of Virginia Press.

Moore, R. (2009), Towards the Sociology of Truth. London: Continuum.

Muller, J. (2000), Reclaiming Knowledge. London: RoutledgeFalmer.

Plumb, J. H. (ed.) (1964), Crisis in the Humanities. Harmondsworth: Penguin.

Snow, C. P. (1959), *The Two Cultures and the Scientific Revolution*. Cambridge: Cambridge University Press.

Wheelahan, L. (2010), Why Knowledge Matters in Curriculum: A Social Realist Argument. London: Routledge.