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How do students' accounts of sociology change over the course of their undergraduate degrees?

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Abstract In this article we examine how students' accounts of the discipline of sociology change over the course of their undergraduate degrees. Based on a phenomenographic analysis of 86 interviews with 32 sociology and criminology students over the course of their undergraduate degrees, we constituted five different ways of accounting for sociology. These ranged from describing sociology as a form of personal development focused on developing the students' opinion to describing sociology as a partial way of studying the relations between people and society. The majority of students expressed more inclusive accounts of sociology over the course of their degrees. However, some students' accounts suggested they had become disengaged with sociology. We argue that the differences in the ways that students were disengaged were not captured by our phenomenographic categories. In conclusion, we argue that our analysis illustrates the crucial role that students' relations to knowledge play in understanding the transformative nature of higher education.

Keywords Conceptions · Knowledge · Phenomenography · Sociology · Students

Introduction

Arguments for the value of undergraduate higher education often rest on claims that it is a transformational experience (Watson 2012). As Watson (2012) points out, this raises a

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series of questions relating to how and why this transformation takes place, whether it is a planned transformation, whether higher education is a necessary and/or sufficient condition for such transformations and whether all forms of higher education result in this transformation. One aspect of higher education that appears to be central in answering these questions is the relations to knowledge that students develop over the course of their undergraduate education. In this article, we examine the variation in sociology students' accounts of the discipline and how they change over the course of their degrees. This is because gaining a better sense of the ways in which students' relations to knowledge change over the course of an undergraduate education are crucial in making stronger arguments for the value of higher education.

Students' relations to knowledge in higher education

Studies that examine students' relations to knowledge in higher education can be separated into three broad types: those that examine students' generic relations to knowledge (what they think knowledge is in general), those that examine the relations that students develop in relation to particular forms of knowledge and those that examine how students' understand the disciplines they study in higher education.

The first type includes the large body of work that has been developed in relation to students' personal epistemologies (see for example Perry 1999; Baxter-Magolda 1992, 2004; Hofer and Pintrich 1997, 2002; Schommer-Aikins 2004; van Rossum and Hamer 2010; Richardson in press) which has examined the relations between students' general views of knowledge and their experiences of learning in higher education (see Nieminen et al. 2004; Kaartinen-Koutaniemi and Lindblom-Ylänne 2008). This work has examined the extent to which personal epistemologies differ between disciplines (Hofer 2000, 2006; Muis et al. 2006) and also included investigations of ways of reasoning and using evidence in particular disciplines (Op't Eynde et al. 2006; Gimenez 2012). It also includes work that has examined how students conceive of the nature of understanding in higher education (Entwistle and Entwistle 1991; Newton et al. 1998; Entwistle and Peterson 2004; van Rossum and Hamer 2010).

The second type includes research that has examined students' understanding of particular ideas and concepts in disciplines such as chemistry (Ebenezer and Erickson 1996; Case and Fraser 1999; Ebenezer and Fraser 2001), economics (Dahlgren and Marton 1978; Meyer and Shanahan 2002; Davies and Mangan 2007); engineering (Liu et al. 2002) medicine (Wilhelmsson et al. 2011) and physics (Prosser and Millar 1989; Svensson 1989; Prosser 1994; Prosser et al. 2000; Martínez et al. 2001). Whilst the majority of this work has examined concepts in the sciences and economics, there has been work on students' conceptions of social science concepts (Beaty 1987), how business students' understand concepts such as 'sustainability' (Reid et al. 2009) and 'creativity' (Petocz et al. 2009), nursing students' conceptions of internationalization (Wihlborg 2004) and students' changing understanding of research methods in social science (Hay 2007).

In between these general and particular foci has been a body of work that has sought to examine students' accounts of the disciplines they study in higher education. This work has been informed from a phenomenographic approach (Marton and Booth 1997) in which the focus is on understanding the variation in the ways that groups of students understand the disciplines they are studying. Whilst research from this perspective often uses the terms 'experiences' or 'conceptions' to describe students' relations to their disciplines, we use the word 'accounts' in order to show that we are aware that such relations are generally

produced in interviews with students and so cannot be seen as given direct evidence of students' conceptions or experiences (see Säljö 1997; Richardson 1999 for further discussion of these distinctions). Research into students' relations to disciplines has included conceptual work on students' capabilities, in terms of how the study of particular disciplines lead students' to develop particular ways of seeing the world that prepare them for an unknowable future (Bowden and Marton 1998; Baillie et al. 2013) and a number of studies that have examined students' accounts of particular disciplines. It is these studies that are the focus of the current study.

Table 1 sets out the structure of the variation of accounts of different disciplines. In each case, and as is common in phenomenographic studies (van Rossum and Hamer 2010), the variation falls into three main stages. A basic account that is the least inclusive and focuses only on the immediately visible aspects of the discipline, a middle 'watershed' account (van Rossum and Hamer 2010) in which students' begin to focus on personal meaning and a most inclusive account in which they go beyond personal meaning to see the discipline within a wider context. Across the disciplines there appear to be three different ways in which this variation progresses. In relation to Mathematics, Accountancy, Music and Law it appears to shift from a focus on the immediate context (numbers, routine work, the instrument or content) to a focus on how this is formed into a system of meaning to a focus on how this relates to the students' position in relation to the world. The variation in geography shifts from a general account of the world to a account that is structured into parts to a account that is focused on interactions. In geosciences, there is a similar structure, except it moves on from interactions to relations between the earth and society. This difference may be due to the different samples used in the studies. Bradbeer et al. (2004) focused on first year students whilst Stokes (2011) sample included students from all 3 years of their undergraduate studies and members of academic staff. If this is correct then it would appear there are two main structures of variation: one which moves from the particular to a system of meaning to a focus on the students' place in the system of meaning and another that moves from the very general to interacting systems to the relation between these interacting systems and the world. These two different structures contain different elements of van Rossum and Hamer's (2010) more general accounts of understanding which shift from understanding everything to constructing meaning to a focus on the self in relation to understanding. What all of these structures of variation have

Table 1 Structure of students' accounts of different disciplines

Discipline	Studies	Least inclusive account	Watershed account	Most inclusive account
Mathematics	Crawford et al. (1994, 1998) and Wood et al. (2012)	Numbers	Models	Approach to life
Accountancy	Sin et al. (2012)	Routine work	Meaningful work	Moral work
Law	Reid et al. (2006)	Content	System	Extension of self
Music	Reid (2001)	Instrument	Meaning	Communicating
Geography	Bradbeer et al. (2004)	General world	Structured into parts	Interactions
Geoscience	Stokes (2011)	Composition of earth—the earth	Processes—interacting systems	Relations earth and society

in common is that they are based on different configurations of the discipline, whether in terms of its parts or whole, the world and the student.

One aspect of students' accounts of their disciplines that has not been examined in these studies, and which we wanted to examine in the current study, is how students' accounts of their disciplines change over time. This is because the existing research has tended to take a snapshot of how students' describe their relations to their disciplines at particular times. Students' changing understanding over time has been examined in research into students' accounts of particular concepts (for example see Dahlgren 1989; Trumper 1998), research into students' epistemological development (for example see Baxter-Magolda 1992, 2004), research into students' conceptions of learning (for example van Rossum and Hamer 2010) and research into students' learning patterns (for example see Donche et al. 2010; Neilsen 2013; Richardson 2013).

In this study we were interested in examining the variation in students' accounts of sociology and how these changed over the course of their undergraduate education. A previous publication for this project has examined students' accounts of sociology in their first year (Ashwin et al. 2012). However, whilst there is a rich literature on the teaching of sociology (Abbas and McLean 2010; Halasz and Kaufman 2008; Luckett 2009; McLean and Abbas 2009; West et al. 2011) and a growing literature on sociology curricula in higher education (for example Luckett 2012; Shay 2013), there have been no previous studies that have examined how students' accounts of sociology change over time. Students' engagement with sociological knowledge was an aspect of Jary and Lebeau's (2009) study of the different ways of being a sociology student in five universities in the UK. Based on the work of Dubet (see for example Dubet 2000), they argued that students' engagement can be characterised across three dimensions. The first of these they call 'personal project', which reflects students' view of the value and usefulness of what they are studying. The second dimension is students' level of social integration into university life. The third dimension, which is closest to our study, is students' level of intellectual engagement with their studies. Dubet (2000, p. 100) expresses this in terms of the way students "'form' themselves through the meaning they attribute to knowledge". However, Jary and Lebeau (2009) use of these three dimensions was to express eight ideal student types based on the absence or presence of each dimension rather than to explore how students' views of sociology changed over time.

In summary, the purpose of the current article is to examine the variation in students' accounts of sociology and to examine how these changed over the course of their undergraduate degrees.

Methodology

The research project

The Pedagogic Quality and Inequality in University First Degrees Project was a 3 year ESRC-funded investigation of sociology and related social science degree courses in four universities, which were given the pseudonyms Prestige, Selective, Community, and Diversity Universities in order to reflect their different reputations. The departments at Prestige and Selective have been regularly rated in the top third of UK higher education league tables for their research and teaching in Sociology, whilst those at Community and Diversity have been regularly rated in the bottom third.

Three years' intensive fieldwork produced rich data sets, including: in-depth interviews with 98 students eliciting biographical stories and their perceptions and experiences of higher education; 31 longitudinal case studies following students throughout the 3 years of their degree programmes; a survey of over 750 students; interviews with 16 staff; analysis of video recordings of teaching in each institution in each year of the degree (12 sessions); analysis of students' assessed work (examples from each year); a focus group discussion with tutors from all four institutions about students' assessed work; as well as documentary analysis and the collection of statistical data relating to the four departments.

This article reports on an analysis of 86 interviews with the 31 case study students who we interviewed in over the course of their undergraduate degrees. Twenty-four of these students were interviewed in all 3 years and seven were interviewed in their second and third years. These interviews focused on students' identities, their experiences of studying at university and their wider experiences outside of university. In each interview they were asked about how they saw sociology as a discipline. It was on this aspect of the interview transcripts that the analysis for this article was focused.

The case study students were self-selecting participants who responded to invitations to be involved in the project that were distributed to all first students studying criminology or sociology at each institution in the first year of the project (2008). They were given a £20 shopping voucher for their involvement in each interview and were interviewed by members of the project team who were from a different institution and therefore not involved in teaching or assessing them. There were nine students from Diversity and Prestige, seven from Selective and six from Community who acted as case study students. In reporting the outcomes each student has been given a pseudonym. In phenomenography a sample should maximise the potential variation in accounts between participants (Trigwell 2006). Table 2 sets out the demographic information for the case study sample compared to the students studying social studies degrees in each of the institutions. It shows that, whilst the case study students include a higher proportion of older students, male students and students who identified themselves as having a disability and a lower proportion of international students, it can be seen to have maximised the potential variation between students in terms of these demographic factors.

Data analysis

In this article we have analysed our interview data using a phenomenographic approach (Marton and Booth 1997). The focus in our analysis was on qualitative variation in the ways in which the students' described their understanding of sociology as a discipline. Categories of description were formed by examining the qualitative variation in the meaning of students' accounts of sociology and the logical relations between each of the categories of description. The categories were formed and reformed by moving between these two forms of examination with the aim of constituting a hierarchy of empirically grounded and logically consistent outcome space which captured the qualitative variation between each of the categories of description (Marton and Booth 1997; Åkerlind 2005). It should be noted that it is the variation between the categories, rather than the categories themselves, that is the focus in phenomenography and that the outcomes from phenomenographic studies are based on the variation across all of the interview transcripts rather than a categorisation of each individual in the study (Marton and Booth 1997; Åkerlind 2005). Thus any one interview may contain more than one of the categories of description constituted in this study. When examining how students' accounts of sociology changed over between their first and final interviews, individuals were assigned to the highest

Table 2 Demographic information of case study students compared to social studies student populations for each institution

	Diversity (%)		Community (%)		Selective (%)		Prestige (%)	
	Sample	All[a]	Sample	All[a]	Sample	All[a]	Sample	All[a]
Age								
18–21	4 (44)	80	4 (66)	90	3 (42)	80	8 (88)	100
22+	5 (56)	20	2 (33)	10	4 (58)	20	1 (11)	0
Ethnicity[b]								
White British	1 (11)	20	6 (100)	90	3 (43)	50	5 (36)	40
Black British	2 (22)	10		0	1 (14)	10	1 (11)	0
British mixed ethnicity	2 (22)	10		0	3 (43)	0	1 (11)	0
Asian British	2 (22)	20		0		10	1 (11)	10
International	2 (22)	40		0		30	1 (11)	40
Gender								
Female	6 (66)	80	2 (33)	70	4 (57)	70	7 (88)	80
Male	3 (33)	20	4 (66)	30	3 (43)	30	2 (11)	20
Identified self as having a disability								
No	6 (66)	100	5 (83)	90	5 (71)	90	9 (100)	90
Yes	3 (33)	0	1 (17)	10	2 (29)	10		10

[a] Based on Higher Education Statistics Agency (HESA) figures for Social Studies in 2008–2009 (HESA Reference: 30690). Figures rounded to nearest 10 % to protect the anonymity of the institutions

[b] Based on HESA categorization of ethnicity

category of description that was evident in their interview. It is important to recognise that this is a use of phenomenographic outcome space rather than a part of the phenomenographic study. Finally, the claim being made about the outcome space is that it is constituted in the relation between the researchers and the data (Marton and Booth 1997). Thus, it is accepted that it is not the only possible outcome that could be constituted from the data. What is important is that the categories can be argued for convincingly on the basis of the data (see Åkerlind 2005 for an analysis of the different approaches taken in phenomenographic studies).

In forming the categories, we were aware of Ashworth and Lucas's (1998) criticism that phenomenography tends to overly focus on authorised accounts rather than the meaning the particular phenomena have for students. In analysing the data we attempted to bracket our understanding of sociology. In addition, the analysis of the structure of variation of students' accounts of different disciplines outlined in the literature review was not carried out until after the analysis of the student interviews had been completed.

Outcomes

We constituted five different ways of accounting for the discipline of sociology:

1. Sociology is about developing my opinions on a broad range of issues.
2. Sociology is the modules that I study.
3. Sociology is the study of societies/other people.
4. Sociology is the study of the relations between people and societies and includes me.

5. Sociology offers a number of different ways to study the relations between people and society each of which offers a different and partial picture of these relations.

These different ways of accounting for sociology involved different relations between the student, the world and the discipline of sociology. Table 3 sets out the outcome space as a whole and how the different categories of description fit within this. The structural aspects focus on the changes in what is in the foreground and background of the accounts. These shift from sociology being an undifferentiated whole which is defined by the students' interest, to sociology being split into pre-defined parts which are separate from the student, to sociology being a relational whole which includes the students, to sociology being a partial relational whole which includes the student. The referential aspects focus on the meaning of sociology, which shifts from sociology meaning a series of issues or topics to sociology being a way of understanding the world. These structural and referential aspects come together to form each category of description: under category 1 sociology is an undifferentiated way of the student pursuing their interest in issues whereas, under category 5, sociology is a partial, relational way of understanding the world that includes the student. The key shift comes in category 3 where students shift from seeing sociology as a series of issues and topics to a way of understanding the world. We now set out each of the categories in turn and in doing so focus on giving a richer sense of the variation between the categories.

Sociology is about developing my opinions on a broad range of issues

Students' accounts which aligned with this category described sociology in a very broad way that focused on issues. These accounts presented sociology solely as a form of personal development in which students should focus on discussing issues and forming an opinion about them. In these accounts the view of the discipline and the world were undifferentiated in that both of these were defined as being about issues and the view of the self was that it was concerned with developing opinions about these issues. One of the tutors in Diversity referred to this approach to sociology as 'opinion-ology':

> I don't know whether sociology is like a fixed thing 'cos it kind of like features in everything and I like various bits within it. I love Radio 4 [a news and current affairs radio station] and there's lots of stuff that comes up and you kind of think "Oh this is related to sociology" and it obviously is a very wide discipline. I enjoy it, but that's like saying "Do you enjoy culture?" (Fleur, Prestige, Year 3).

> From the degree hopefully I'll get an understanding of the way the world works and fill out my own arguments, and my ideas, and my own sense of politics and my

Table 3 The referential and structural aspects of the categories of ways of describing sociology

Structural aspects	Referential aspects	
	Issues/ topics	Way of understanding the world
Undifferentiated whole defined by my interest	1	
Pre-defined parts separate from me	2	3
Relational whole which includes me		4
Partial relational whole which includes me		5

> understanding of people. I think it's really important to have a really rounded and thought out understanding of the world around you (Ed, Selective, Year 1).

Sociology is the modules that I study

The accounts of students that were aligned with this category described sociology in terms of the modules that they studied on their course. In such accounts, when being asked about the discipline of sociology, students would answer only in terms of the modules that they had studied. This gave their accounts of sociology more structure than the accounts that aligned with the first category but there was no sense in these accounts that sociology was something that related to the real world. Sociology was what these students studied on their course, the ideas they discussed and the work they produced and it was the modules that made up the course that gave sociology its structure. In these accounts there was a separation between the view of the discipline and the view of the world because the discipline was the courses that students studied, whereas the world was seen as very separate to these courses. The view of the self was focused on developing interests in these courses rather than developing opinions but there was no sense that the students saw themselves as implicated in the things that they were studying:

> They say it's like the study of society but each module has a specific area … I do sociology of health and illness and that seems like a whole separate kind of topic because it's applied to medicine or sociology… I then do the gender, media, popular culture module and that's all about gender and the media: analysing films, looking at like race and gender and feminist discourses. Sociology in general is very broad. It's the study of society but then within that you've got lots of specific areas. (Fleur, Prestige, Year 2).

> We did this module analysing the social and there was another one on culture but the one we were doing analysing social it was quite interesting because everything was about power… First we had a few lectures about power and then you can pick a topic that you wanted to go to further in depth about and then you could discuss aspects of power within that. (Leena, Diversity, Year 2).

Sociology is the study of societies/other people

The accounts of students that were aligned with this category described sociology in terms of the study of society. These accounts appeared to be structured in terms of sociological concepts rather than by the modules that made up the course. In these accounts sociology was about the study of the world but the students appeared to see themselves as very separate from the world that they were studying. In these accounts sociology was positioned as the study of other people:

> It's a study of society [Laughs] It's a really in depth study of the factors within society what keeps that society functioning… I think it's all the institutions of family, law, education, class, jobs. (Lucia, Diversity, Year 2).

For some students this distance between the sociologist and other people was a source of frustration. Ed ended up dropping out of his course because he felt that it was too distant from the realities of life:

> They observe social phenomena but they don't actually understand it. It is a really strange kind of situation. You can read about something and a lot of people seem to have no clue of what they are talking about because it is so distant to them and what they are experiencing in their life… The discipline obviously interest me, but it is about people. And I don't think it is really that much people focused (Ed, Selective, Year 3).

Sociology is the study of the relations between people and societies and includes me

The accounts of students that were aligned with this category described sociology in terms of the relations between people and societies and which directly implicated the students as part of this world. Here the discipline of sociology was focused on studying the world and the students were an integral part of this world:

> It was really as if I was discovering an entire world that I'd never even known existed and learning about the way humans think, not in a psychology sense, but the processes by which humans are brought to think in a certain way, why we act in a certain way, why the world is how it is, why buildings are the shape they are, why roads, everything. It's a real passion and I love learning about it. (Ester, Selective, Year 1,)

> I think sociology kind of seeps everywhere. Everything that I do has some kind of sociological background in it. Sociology studies the relationship between people and it's the structures and the system. You'll find that everywhere, even just me and you, the way we're talking. (Lisha, Diversity, Year 3).

Sociology offers a number of different ways to study the relations between people and society each of which offers a different and partial picture of these relations

The accounts of students that were aligned with this category described sociology in a more differentiated way than the previous accounts. They was an explicit sense that there were different 'sociologies' and that all of them were partial and that students' engagement with sociology was also inevitably partial. It was this sense of many, partial, sociologies that characterised the variation between this category and the previous one. Under this category, the discipline was seen as a partial way of understanding the world, the student was seen as having a partial understanding of the discipline, and the world was seen as an object that the student was trying to understand through the discipline:

> There is no destination with this discipline. It is like physics. Once you get to atoms and then you get to the protons. There is always something further and there is no point where you can stop and say 'I understood, I am a sociologist'. You can't understand everything… Sociology makes you aware of every decision you make: how that would impact on my life and how it could impact on someone else. And it makes the decision harder to make. (Ester, Selective, Year 3).

> It does a good job to create the awareness that you may need to develop on further or to continue building on… They create awareness so you know what people are experiencing in certain areas where they are being deprived out of natural resources or they're suffering from diseases that can be easily prevented. But obviously that's just an awareness. If you want to explore more you definitely need to either have a

Table 4 Relations between the category of sociology that students' expressed in their first and final interviews

	Year 3 highest category					
Initial category[1]	1	2	3	4	5	Total
1	3	6	7	4	1	21
2		1	1	2	1	5
3			2			2
4				3	3	3
5						
Total	3	7	10	6	5	31

1. In 24 cases this was an interview in their first year, in 7 cases this was in their second year

job that is related or maybe if you follow a post grad degree so you can actually have the chance to go and experience (Lorenzo, Diversity, Year 3).

Changes in students' accounts of sociology over time

Table 4 sets out the highest category of sociology that could be identified in the students' interview transcript in their first interview, whether this was in their first or second year of undergraduate study, and their third year of undergraduate study.

Table 4 shows that 25 of the 31 students' accounts of sociology appeared to be more inclusive in their third year than their initial interview (the grey shaded cells). In 6 cases the account of sociology appeared to be the same in terms of the outcome space (the unshaded cells). In no cases did the student's account appeared to be less inclusive in their third year than their initial interview (the dark shaded cells).

The quotations used when setting out the categories of description give a sense of some of the changes that took place in students' accounts of sociology. The quotations from Ester show how her accounts of sociology appeared to move towards more inclusive accounts of what sociology was a discipline and how she appeared to becoming increasing engaged with the discipline. However, there were also three different kinds of examples were students appeared to disengage with the discipline. First, Ed's trajectory was one in which he initially saw sociology in very general terms and by his third year had withdrawn from his course because he saw the discipline of sociology as too remote from people's lives. Second, what Table 4 does not show is that there were three students whose account of sociology was less inclusive in their third year than their second year. For example, Fleur is a student whose account of sociology was aligned with category 1 in her first and final year. However, in the quotation from her second year she gives account that is aligned with category 2. Overall Fleur's transcripts give a sense of a student who is struggling with

the academic nature of sociology. Whilst her account of sociology seems to have more structure in her second year than her first year, by her third year she seems to have disengaged with the discipline having felt unable to succeed in it because her qualities are not valued:

> I find the exams and the essays difficult, but I always feel in seminars I will speak probably the most and I feel like I have a great knowledge… maybe just not from a very academic perspective or it is from an academic perspective but I can't reference my point necessarily… I can generally hold my own in most situations, I can converse with people of all ages and from different backgrounds and I find people very interesting… That's why it's quite upsetting because you have some people that will do very, very well in the exams, but they haven't got a lot going on. If you put them in some situations, they just wouldn't be able to cope. (Fleur, Prestige, Year 3).

Third, a very different example of a form of disengagement from the discipline of sociology is provided by the transcripts of Fifi. In her second year she described herself as very personally engaged in and implicated within sociology:

> I'd say that politics would be how countries interact with each other but sociology is more how any kind of boundaries interact with each other… I kind of see it everywhere just kind of analysing hierarchy, maybe like social class… I see myself quite like embedded in it. I think before I saw myself as an individual and I didn't really see myself as part of group… I've learnt to position myself in terms of different aspects of society. (Fifi, Prestige, Year 2)

However, by her third year there is a strong sense that sociology is something that she has done with and is no longer personally involved with. This moving away from sociology has a very different feel to it than the sense of struggle that comes across in the accounts of Fleur and Ed. It is more like sociology was something that was tried on for a while and how has been put away.

> I don't think I made a mistake or anything, I really enjoy it and I think it's quite important. I think it's an interesting way to kind of learn how to see the world. You see things very differently, I think, after you learn sociology. But it's something that I felt I had done with after an undergraduate degree, I didn't want to keep on going with it (Fifi, Prestige, Year 3).

Overall, this analysis shows both the structure of the variation in students' accounts of sociology and the ways in which these changed over the course of their degrees. Interestingly, we found evidence of both students who increasingly engaged with the discipline and three different ways in which students appeared to disengage with sociology.

Discussion

In discussing the significance of our outcomes, we focus on three aspects of the study: the relations between the structure of variation in students' accounts of sociology and those in other disciplines; the extent to which the variation constituted in studies of students' accounts of disciplines can be considered exhaustive; and the significance of the ways in which the students' accounts of sociology appeared to change over the course of their degrees.

The accounts of sociology constituted in this study shifted from a very general account of the world to one that was structured by the curriculum to one that examined the relations

between people and society to one which recognised the partiality of sociology as a discipline. As this configuration captures whether or not students' have a personal relationship to knowledge, it answers the suggestion from Richardson (in press) that changes in students' conceptions may simply be the result of students' regurgitating what they have been taught in their courses. This configuration has a similar structure to that of geography (Bradbeer et al. 2004) and geoscience (Stokes 2011) except that it has the additional aspect of seeing both sociology and students' engagement with it as partial. It also has the same elements of all of the accounts of different disciplines and those of understanding in terms of being made of different configurations of the student, the discipline and the world (Crawford et al. 1994, 1998; Reid 2001; Bradbeer et al. 2004; Reid et al. 2006; van Rossum and Hamer 2010; Stokes 2011; Sin et al. 2012; Wood et al. 2012). Interestingly, these different accounts have some common aspects and some aspects that are particular to certain disciplines. This suggests that studies that examine students' generic relations to knowledge (see for example Perry 1999; Baxter-Magolda 1992, 2004; Hofer and Pintrich 1997, 2002; Schommer-Aikins 2004) and those that examine students' relations to particular disciplines (Crawford et al. 1994, 1998; Reid 2001; Bradbeer et al. 2004; Reid et al. 2006; Stokes 2011; Sin et al. 2012; Wood et al. 2012) may be examining different aspects of students' relations to knowledge and so both may be valuable ways of understanding these relations. However, it also suggests a need for greater dialogue between these approaches in order to gain a better understanding of the relations between the common and specific elements of the knowledge of different disciplines.

Second, the accounts of sociology constituted in the present study are different from those constituted based on our first year data (Ashwin et al. 2012). This raises the question of the extent to which such explorations of students' accounts of disciplines can be seen as exhaustive. In relation to mathematics there are a number of studies, including data from different countries, that examine how students understand mathematics as a discipline (Crawford et al. 1994, 1998; Wood et al. 2012), where in other cases the samples are within a particular institution (Stokes 2011) or a particular year of undergraduate study (Bradbeer et al. 2004). This highlights the potentially partial nature of the outcome spaces produced in phenomenographic studies and the need for a number of such studies in particular discipline areas before we can have confidence about the stability of the variation that is produced in relation to particular disciplines. This is particularly the case in disciplines such a sociology, which have many different versions in different institutional and cultural settings. The current study is based on a sample of students from four differing English institutions and so it would be helpful to have this augmented with data from international case studies in order to understand whether there is variation internationally in undergraduate students' accounts of what constitutes sociology.

Finally, in terms of the changes to students' accounts over the course of their degrees, we found that most students did describe sociology in a more inclusive way in their final interviews. However, there are three caveats to this. First, the majority of accounts we examined did not appear to move beyond the 'watershed' conception of sociology. Second, in contrast to van Rossum and Hamer's (2010) findings on students' accounts of understanding, not all students' accounts of sociology became more inclusive over time and some students' accounts of sociology appeared to become less inclusive between their second and third year. Related to this, our analysis indicated that there were different kinds of disengagement with sociology. In the case of Ed, this disengagement seemed to come about because the discipline did not offer him what he wanted. In the case of Fleur, it seems to be more related to a struggle in order to come to terms with the academic, particularly writing, demands of the discipline. Finally, in the case of Fifi it seems to be

related to a sense that, whilst studying sociology was interesting, it was time to move onto something else. The variation in students' accounts of sociology is not able to capture these different kinds of disengagement but they do appear to be related to Dubet's (2000) dimensions of student engagement. Ed and Fifi appear to have personal projects that, in different ways, are moving them away from sociology whereas for Fleur it seems to be an issue with her intellectual engagement with the discipline. Thus our findings appear to support Jary and Lebeau's (2009) suggestion that such types of engagement are useful for understanding sociology students' experiences of higher education. It is an interesting question as to whether these forms of engagement are also relevant for other disciplines.

Conclusion

In conclusion, we argue that the outcomes from this study offer some hints as to how to answer some of Watson's (2012) questions of how and why students are transformed by higher education, whether this transformation is planned, whether higher education is a necessary and/or sufficient condition for such transformations and whether all forms of higher education result in this transformation. In particular, they suggest that students' engagement with academic knowledge involve a transformation of the way in which students see the relations between themselves, the world and the disciplinary knowledge that they are studying. Such transformations would appear to be a planned element of higher education, in which an undergraduate education is a necessary element. However, our outcomes also suggest that students' engagement with knowledge is not a sufficient condition for this transformation and that these also need an alignment between students' personal projects and the focus of disciplinary knowledge.

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