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10. PATTERNS OF PARTICIPATION

A Participatory Account of Learning to Teach

> The word 'learning' undoubtedly denotes *change* of some kind. To say what *kind of* change is a delicate matter.
>
> (Bateson, 1972, p. 283, emphasis in original)

INTRODUCTION

Approaches to learning in educational scholarship may be characterised in terms of their affinity with two broad metaphors, those of learning as acquisition and learning as participation (Lave, 1997; Sfard, 2003, 2008). The relationships between and among frameworks in line with one or the other of these metaphors have been widely discussed in the literature, but less so in relation to teachers than to students. In what follows I introduce a participatory framework called Patterns of Participation (PoP). One intention in PoP is to phrase learning in terms that encompass what may in other frameworks referred to as knowledge growth, belief change, and identity development. The question I ask is how the kind of change called learning may be conceptualised (cf. the quotation from Bateson), if one adopts such an encompassing, participatory approach?

To address the question I initially discuss the metaphors of acquisition and participation as they relate to teachers and teaching. The intention is to outline dominant trends in how other lines of research on teacher learning relate to these metaphors. This section situates and serves as a backdrop for a presentation of the PoP framework. PoP draws primarily on social practice theory and symbolic interactionism and is situated in what Russ, Sherin, and Sherin (2016) refer to as the situative and socio-cultural perspective on learning to teach. It aims to understand (1) teachers' contributions to the interactions that emerge at their schools and in their classrooms (Skott, 2013); and (2) their experiences of being, becoming, and belonging as they relate to such interactions (Skott, in press). From a PoP-perspective, teachers' professional learning may be viewed as changes over time in these contributions and experiences.

I should point out that the present chapter is not an empirical piece in the sense that it presents the design, methods, and results of a particular study in any detail. I do refer to the use of PoP in empirical research, but the chapter should be read as an empirically informed theoretical essay. Also, and in contrast to many other publications

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on teacher learning (cf. Fishman, Davis, & Chan, 2014), I do not at present focus on the processes and outcomes of comprehensive programmes for teacher education or development. Much writing in the field is on if and how particular programmes or other forms of support enable teachers to develop their teaching proficiency so as to align with current recommendations for educational reform. Notwithstanding the obvious potentials of such studies, the intention of PoP is currently less normative and the emphasis is at present on analyses of what it means for a teacher at the beginning of her career to learn to participate in school life in ways that allow her to be recognised as an accomplished colleague by herself and by others in the particular setting.

ACQUISITIONISM AND PARTICIPATIONISM IN RESEARCH ON TEACHER LEARNING

Each of the metaphors of acquisition and participation has been used about a variety of different approaches to learning, which are somewhat at odds with one another, but that nonetheless share one or a few key characteristics. When used about school based learning, acquisition generally refers to frameworks that carry connotations of learning as gaining individual ownership to objectified, mental entities, irrespective of the view of the learning process, that is, of how such ownership is achieved. Sfard (2008) suggests that an acquisitionist discourse on learning and thinking has metaphorical connotations that "make us think of knowledge as a kind of material, of human mind as a container, and of the learner as becoming an owner of the material stored in the container" (p. 49). Radical constructivism, with its assumption that "knowledge, no matter how it be defined, is in the heads of persons" (von Glasersfeld, 1995, p. 1), may be regarded as a paradigmatic example of a framework that conceives of learning as coming to own or possess particular contents. However, acquisition has also been used about frameworks that view the teaching-learning process as one of transmission (Lave, 1997).

In contrast, participatory frameworks consider human learning a matter of shifting modes of mediated participation in socially and culturally developed practices. Often drawing on Vygotsky (1978, 1986), such frameworks consider learning a process of moving from the periphery of the practice in question to participating more fully within the dynamic contexts in which the practice unfolds. This makes learning ubiquitous and in Lave's terms synonymous with "changing participation in the culturally designed settings of everyday life" (Lave, 1996, p. 6).

Approaches to Research on Teachers' Knowledge, Beliefs, and Identity

I have suggested elsewhere that different subfields of research on and with teachers tend to adopt different conceptual or theoretical frameworks and that the tendency to adopt acquisitionist approaches dominate studies of teachers' knowledge and beliefs (Skott, 2013). The development of both these fields is closely related to the constructivist revolution of the 1980s, and the constructivist orientation is often

still apparent. This is so in spite of a growing tendency to link teachers' knowledge and beliefs to practices in the classrooms in which these mental constructs are expected to be enacted. Drawing on Shulman (Grossman, Wilson, & Shulman, 1989; Shulman, 1986, 1987), studies of teacher knowledge suggest that there are types of knowledge and ways of knowing that are specific to the profession and that are linked closely to classroom interaction (e.g. Ball, Thames, & Phelps, 2008). This indicates that a standard university course on the subject matter taught does not suffice as a background for quality teaching, and that teachers need to acquire other knowledge more closely connected to instruction.

Somewhat similarly studies of teachers' beliefs draw for instance on Abelson (1979, 1986), Nespor (1987), Pajares (1992, 1993), and Rokeach (1969) and traditionally view teachers' beliefs as located in the mind of the individual and as an explanatory principle for practice (cf. Skott, 2009, 2015a). More recently the field has increasingly taken contextual factors into consideration and adopted less causal and more dynamic perspectives on belief-practice relationships (cf. Schoenfeld, 2011; Skott, 2015b). Generally, however, this does not question the understanding of beliefs as reified mental entities.

Between them these developments indicate that there is a growing concern that for teachers to 'enact' their knowledge and beliefs, their learning needs to be situated in close proximity to the practices that unfold in their current or future classrooms. However, the very notion of knowledge and belief 'enactment' carries the connotation that knowledge and beliefs reside within the individual. In this sense, these developments are still compatible with acquisitionism, and the main challenge that they pose to the traditions of their respective fields is that teachers need to hold other knowledge than traditionally taught and that the impact of their beliefs on practice may be modified by contextual constraints. However, it is not implied that a different conceptualisation is needed of what it means to know and believe (Skott, 2013).

In spite of that, a claim that research on and with teachers is based on acquisitionism needs to be modified. In particular the relatively recent research interest in teachers' professional identities is to a greater extent inspired by participatory accounts of human functioning (Beauchamp & Thomas, 2009; Brown & McNamara, 2011; Gresalfi & Cobb, 2011; Hodgen & Askew, 2007; Kazemi & Franke, 2004; Olsen, 2008; Van Zoest & Bohl, 2005). These studies draw for instance on discourse analysis (Gee, 2000–2001), complexity theory (Opfer & Pedder, 2011), and social practice theory (Holland, Skinner, Lachicotte Jr, & Cain, 1998; Wenger, 1998) to relate teacher learning to contextual issues, in a variety of different understandings of *context*, and view such learning as inherently linked to teachers' emerging and shifting professional identities. To the extent that the contents of instruction is considered in these studies, the question is often how teachers position themselves in relation to multiple and possibly conflicting discourses on the subject matter taught, for instance as framed within a dominant school culture and a specific teacher development initiative (Skott, in press).

Addressing the Split between Acquisitionist and Participatory Approaches

Clearly, the above picture of research on and with teachers is a simplification. However, there does seem to be a tendency for studies of teachers' knowledge and beliefs to draw primarily on acquisitionist (constructivist) frameworks, while studies of their professional identities generally adopt a more participatory stance. These differences in the theoretical and methodological underpinnings of the different research traditions and the inherent differences in the view of learning lead to a certain disconnect between them. They use qualitatively different units of analysis, research on knowledge and beliefs emphasising reified mental constructs located in the mind of the individual, identity studies focusing on some understanding of person-in-practice (Skott, Van Zoest, & Gellert, 2013). From this perspective the different subfields do not speak the same language, which results in some incoherence in the general field of research on teacher learning. This suggests that the field may benefit from addressing more carefully either (1) how to coordinate the contributions of the different frameworks across the acquisition-participation divide; (2) how acquisitionist approaches may address issues pertaining to teachers' identities; or (3) how participatory approaches may deal with what is traditionally phrased in terms of knowledge and beliefs.

My argument is, then, that the split in the general field of research on and with teachers into distinct subfields on their knowledge, beliefs, and identity is due not only to the different substantial foci, but at least in part to the use of different theoretical frameworks, the two first fields being primarily acquisitionist, while the last is generally more participatory. In turn this leads to an incoherence that may be counterproductive to the purpose of understanding the role of the teacher in and for classroom practice, as the subfields do not significantly inform one another.

To address this problem I opt for the third of the three possibilities mentioned above, and suggest that it may be helpful to develop a conceptual framework that interprets learning to teach in participatory terms. The PoP framework presented below views teaching, and human action and meaning-making more generally, as shifting modes of participation in a range of different present and prior practices in view of the ones that unfold at the instant. This means that the focus is no longer on enactments of teacher's knowledge and beliefs, again understood as relatively stable mental constructs. The dynamic and processual perspective, however, does not disregard a teacher's involvement with the content. It interprets her content-related contributions to classroom interaction as a response to the meanings (s)he makes of the situation at hand. As far as the contents is concerned the focus is on if and how the teacher in the particular situation engages in a content-related discourse (e.g. how to prove a particular conjecture in mathematics) and in value-laden meta-discursive practices on this content (e.g. considerations on why reasoning and proving is important in school mathematics). However, PoP-studies are also interested in if and how the teacher is simultaneously involved in other practices (e.g. an internalised

discussion with herself or others on how best to support students' self-confidence) that may significantly transform her engagement with the contents

POP: TOWARDS A PARTICIPATORY ACCOUNT OF TEACHER LEARNING

Background to PoP

The lack of coherence in the general field of research on teacher learning is itself an impetus to search for frameworks that may overcome the split between the different subfields. As I have outlined elsewhere (Skott, 2013), however, there are also two other aspects to the background of PoP. First, it is based on dissatisfaction with the ways in which the problems and results of mainstream research on teachers' beliefs are generally dealt with in that field. The key concept of beliefs is ill-defined if defined at all, and partly as a consequence it is impossible to operationalise it in ways that shed sufficient light on these elusive constructs. Further, belief research is based on the assumption that teachers' beliefs significantly impact practice, and although this premise is rejected as much as confirmed in empirical studies (Fives & Buehl, 2012), it still orients the field. In spite of the more dynamic and less causal interpretations of the role of teachers' beliefs that have been developed recently (e.g. Schoenfeld, 2011), these problems still appear unresolved (Skott, 2015a).

While this provides a somewhat negative reason to look for alternatives to beliefs, a second and more positive argument was developed from a number of empirical studies that initially focused on beliefs, but gradually came to challenge the core concepts and assumptions of belief research (Skott, 2001, 2004, 2009a; Wedege & Skott, 2006). Building methodologically on developments of grounded theory (Charmaz, 2000, 2006), these studies resulted in more processual understandings of the role of the teacher in and for classroom practice. Increasingly, they became inspired by social practice theory and symbolic interactionism as fruitful approaches to understanding the functioning of teachers in mathematics classrooms.

Inspiration: Social Practice Theory and Symbolic Interactionism

In social practice theory *practice* is not conceived as 'somebody's practice', that is, in an individual possessive sense as when reference is made to 'a teacher's practice' (Holland et al., 1998; Lave & Wenger, 1991; Rogoff, 1995; Wenger, 1998). Rather, it is regarded as a communal, ever-evolving, and dynamic, though somewhat resilient, process and outcome of people interacting in particular contexts, which are recreated and further developed in the process. To participate in a practice is to engage in the negotiation of its meaning, and learning is synonymous with shifts and changes in such engagement and with the concomitant changes in the relation between the individual and the practice in question. Individual learning is closely related to identity and recast as becoming a certain kind of person in a particular setting.

The main focus in studies of communities of practice is generally on how communal practices evolve and are regenerated, sometimes including how they relate to neighbouring practices and broader social structures. This means that a community-of-practice perspective may shed light on how an individual moves from peripheral to more comprehensive modes of participation in the practice in question. However, the perspective may underspecify experiences from other practices and consequently lose sight of the role they play for the individual as she moves into a new community. In other terms, the significance of participation in other past and present practices for the individual's contributions to the one that unfolds at the instant may be lost in empirical studies that focus exclusively on the current one. This suggests that there is a need to re-centre the individual in participatory accounts of learning, and focus not on any specific practice per se or on any combination of practices (e.g. that of a mathematics classroom or among the teachers in a department at a school), but on how individuals' participation in the practice in question (e.g. one that develops in a classroom) relates to their re-engagement in a multitude of other ones and how this relationship changes over time. My colleagues and I have found Chicago school symbolic interactionism helpful for this purpose (Blumer, 1969; Mead, 1934).

One of the apparently simple premises of symbolic interactionism is that people act in and towards objects in their world according to the meaning the objects have for them (Blumer, 1969). However, objects, that is, whatever people refer to in a particular situation, are social constructs and their meanings are neither located in the particular object itself nor a result of a purely psychological construction in the mind of the acting individual. Meaning is emerging in and from interaction, as "the meaning of a thing for a person grows out of the ways in which other persons act toward the person with regard to the thing" (Blumer, 1969, p. 4). In any interaction, then, people are constantly interpreting each other's verbal and physical gestures, including others' possible reactions to their own behaviour, and in the process they adjust their actions accordingly. This view of interaction is related to the I-me dynamic in Mead's conceptualisation of 'self' (Mead, 1934). As the I acts, the individual takes the attitude of individual and generalised others to herself and instantly becomes a me. In turn, this leads to adjustments or transformations of the initial act.

PoP Interpretations of Teachers' Actions

As an example of a PoP interpretation of teachers' actions, consider a mathematics teacher who seeks to support a group of students in developing an argument for their observation that the difference between two consecutive perfect squares seems to be the sum of the bases (e.g. that $6^2 - 5^2 = 6 + 5$). The teacher may have comprehensive experiences with mathematical reasoning and proving and may be able to prove the result for instance in an interview setting. (S)he may also in interviews emphasise that developing such arguments should be a core activity in school mathematics. However, as classroom processes unfold, she anticipates and interprets the words,

the tone of voice, the raised eyebrows, etc. of the students in question as well as of other students in the class. Also, her contributions to the interaction may change if she, while engaged in a mathematical discourse in order to assist the students, also orients herself towards a proposal for educational reform promoted by her teacher education programme; positions herself within a team of collaborating teachers whose cooperation focuses on the well-being of individual students rather than on their subject-matter learning; and attempts to document her own mathematical expertise, as her subject matter competence was recently questioned at a PTA meeting. In symbolic interactionist terms, the teacher takes the attitude of different individual and generalised others (the students, the teacher education programme, her team, the parents) and draws upon and renegotiates the meaning of the related social practices and discourses. These discourses and practices may function as what Holland and her colleagues call "figured worlds", that is, collective as-if worlds in which "particular characters and actors are recognised, significance is assigned to certain acts, and particular outcomes are valued over others'' (Holland et al., 1998, p. 52). In this interpretation, the teacher relates at any point in time to multiple figured worlds that differ between them with regard to what it takes to be recognised as a legitimate or competent actor; what acts are considered significant; and what outcomes are valued. Yet, these figured worlds may all play a part for the teacher as the interaction unfolds.

PoP Interpretations of Teacher Learning

From a PoP perspective on novice teachers' professional learning, a key question becomes what changes occur in the significance, character, and mutual relationships among other practices and figured worlds that the teacher draws on in classroom interaction over the first few years of their career. As an example, consider the case of Anna (cf. Skott, 2013). Anna was in her mid-20s when she graduated as a lower-secondary teacher of mathematics from a college in Denmark. She was followed in a longitudinal case study for periods of time over the first three years of her teaching career. At the time of her graduation she was highly committed to her new profession, enthusiastic about current recommendations for reform in mathematics education (*the reform*), and also keen to develop close relationships with the students. She prioritised mathematics and was explicit that she was a *mathematics* teacher, rather than a teacher who happens to teach the subject.

As Anna begins to teach at Northgate Primary and Lower Secondary School, a municipal school in a well-to-do area of a large city, she establishes close collaboration with three experienced colleagues in a team that teaches all subjects to the three classes in a year-group. Anna is explicit that she is happy to be in charge of all mathematics teaching in the year-group, as she considers her own priorities as they relate to the teaching and learning of mathematics somewhat at odds with those of her colleagues in the mathematics department. Analyses of observations from Anna's classroom suggest that Anna draws on *the reform* and on mathematics as

figured worlds and on *relationing* and *teaming* as important practices that inform her contributions to her interactions with the students (cf. Figure 1). Also, these practices and figured worlds modulate one another and Anna's engagement with mathematics, for instance, is often significantly transformed by her concern not to jeopardize her relationship with the students and by the emphasis on investigative activities and student communication in the reform.

Throughout the study Anna is very committed to the tasks of teaching, but the significance of and relationships among the four previously dominant practices and figured worlds change. In particular, Anna increasingly acknowledges the professionalism of her colleagues in the mathematics department and she moves towards a more central position within the department herself. Also, she develops a positive working relation with the leadership, and she is asked for help and advice on administrative and educational issues by the headmaster and the deputy. In turn, these developments support a shift in her approach to instruction. Gradually she becomes less concerned with *the reform* and *relationing* and her engagement with mathematics in the classroom changes towards a somewhat stronger emphasis standard procedures. Learning to teach, then, has meant that the significance of some of the practices and figured worlds depicted in figure 1 has faded, while others related to Anna's position at Northgate have become more prominent and contribute to transforming her approach to the teaching of mathematics at the school. In the particular case, Anna develops from being 'a *mathematics* teacher at Northgate' and to a greater extent becomes 'a mathematics teacher at *Northgate*'. In the last interview Anna is explicit that she thinks she is a better teacher of mathematics now than when she first arrived at Northgate.

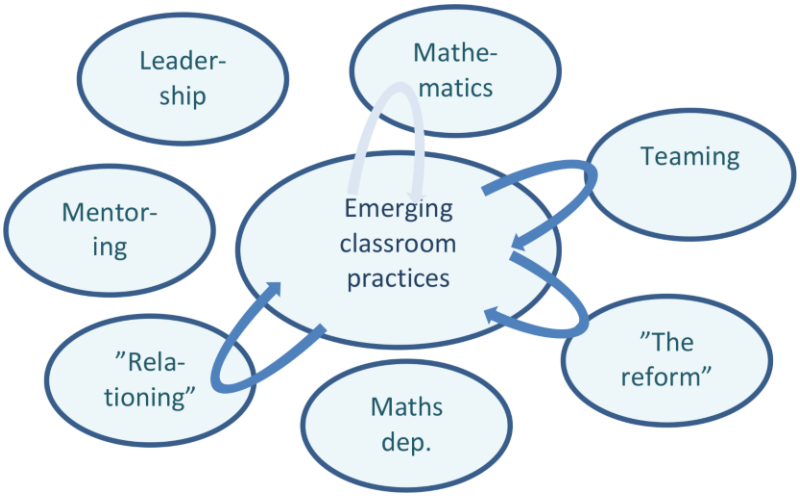

Figure 1. Dominant practices and figured at the beginning of Anna's career

As I have pointed out repeatedly, PoP-studies have primarily been used for analytical purposes. It has not been part of the endeavour to set up a list of criteria for what quality instruction is, let alone using such criteria for an assessment of the instructional approaches of teachers like Anna. Anna's comment in the last interview that she is now a better teacher is her own assessment. One interesting aspect of this, as seen from a PoP perspective, is if and how changes in her criteria for that assessment influence how she interacts with the students and in other ways contributes to school life.

CONCLUSIONS

Increasingly teacher education and development programmes have submitted the notion of communities of practice to the non-trivial transformation from being a primarily analytical construct to becoming a tool for educational design (e.g. Fishman, Davis, & Chan, 2014). This means that attempts are made to promote teachers' learning and professional competence through their participation in professional learning communities that are created as part of comprehensive development programmes. Such programmes generally emphasise particular aspects of current reform initiatives.

Notwithstanding the potentials of such initiatives, PoP is presently used for less normative purposes. My colleagues and I use it to theorise teacher learning in the majority of cases in which teachers are not enrolled in long-term programmes for professional development. Acknowledging that learning is ubiquitous (Lave, 1996), PoP investigates the reflexive relationships between novice teachers' shifting professional identities, their changing positions among their colleagues and at the school in general, and their contributions to emerging classroom practices. Analysing classroom interaction, we interpret teaching as an outcome of the teacher taking the attitude to herself of individual and generalised others, including different practices and figured worlds. The acts of teaching, then, are viewed as informed and pieced together by the teacher's re-engagement in significant practices and figured worlds beyond the classroom, the decision on which to draw on the particular situation based on the meaning she makes of the interaction itself. To stay with this metaphor, the size, shape, and colour of these other 'pieces', e.g. the character and influence of the reform or of the teacher's team, emerge in the process (Skott, 2013). Using PoP for analytical purposes we at one level of analysis seek to put together the jigsaw puzzle consisting of these pieces for different, individual classroom episodes that appear to be significant for the teacher in question. More to the point of professional learning, we build on longitudinal studies to point to trends and developments in the recurrent and possibly routinized ways in which the teacher engages with other practices and figured worlds as she interacts with the students and the contents. From a PoP perspective, teachers' professional learning may be conceptualised exactly as such trends and developments in the patterns of their contributions to classroom interaction.

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