IDENTITY WORK IN TRANSITIONING BETWEEN CONTEXTS

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Abstract. The paper explores – mainly at a theoretical level - the relationship between identity work involved in children’s transitioning between school mathematics contexts and other important contexts such as their homes. The exploration is then used to draw up a methodological framework for identifying contexts between which children transition and the identity work involved.

Keywords: transition between contexts, identity, core identity, identity work

INTRODUCTION

In this paper, I explore the relationship, in mathematics education, between the notion of transitioning between contexts and the notion of identity work. More precisely, I look at identity work as a feature of transitioning between contexts and sketch a methodological framework for identifying contexts and identity work. While actual analysis of data will await a later paper, related research have been done on the same set of data (Lange, 2007; 2008b; 2008a; 2009; Lange & Meaney, 2010; Lange & Meaney, 2011). This body of research consider identity work that children are forced to engage in when they transition between school mathematical contexts and other important contexts, such as their home, in which they live their lives. Another background to the paper is that much research using the notion of identity in my reading leaves this notion poorly defined or not defined at all, especially in regards to what counts as instances of identity in data and what not. Furthermore, when multiplicity and fluidity of identity is posited, as usually is the case (Bishop, 2012), little consideration is given to the psychological workings of such constructions. The resulting conceptualisation of identity does not correspond to my experience of my identity. As I hesitate to apply it to myself, I am uneasy about it being applied to others.

TRANSITIONING BETWEEN CONTEXTS

Meaney and Lange (2012 forthcoming) saw “contexts as enactments of systems of knowledge within social practices” and adjustment to new contexts as always involving learning. School mathematics is a social practice whose elements according to Fairclough (2003) are (a) action and interaction; (b) social relations; (c) persons (with beliefs, attitudes, histories, etc.); (d) the material world; and (e) discourse.

Classroom teaching articulates together particular ways of using language (on part of both teachers and learners) with the social relation of the classroom, the structuring use of the classroom as a physical space, and so forth. … Social events are casually shaped by (networks of) social practices—social practices define particular ways of acting, and although actual events may more or less diverge from these definitions and expectations
Thus, while the social practice of school mathematics frames the social events of mathematics classrooms, e.g. children becoming conversant with school mathematical forms of reflection (Radford, 2008), social practices from contexts between which the children transition, may cut across and co-shape social events.

Meaney and Lange (2012 forthcoming) emphasised transition not only as a transitioning from whatever context the child comes from (“background”) into the context of school mathematics education but also from the latter into out-of-school contexts in which the child is participating, not least the home context. Emphasising the two-way nature of transitioning troubles assumptions of self-evident, natural “goodness” of school mathematics education by pointing to the fact that the children have to transition “back” to the contexts in which they live their out-of-school lives. If the contexts, between which children transition, are based on different or even conflicting systems of knowledge and social practices, then the reflection required in adjusting to the contexts may be detrimental to children’s capacity to enact the knowledge systems in one or both contexts. This could be the case with the system of school mathematics knowledge and a system of cultural knowledge at home. Thus, accentuating transitioning between contexts as a two-way process has a particular edge in regards to children from a non-dominant social groups, such as colonised Indigenous populations, non-Western immigrants in Western societies, working class or rural populations in (post-)industrial societies; in short, non-middle-class groups in societies dominated by (often white) middle-class. In these circumstances, transitioning into a school mathematics context may involve loosing connections with the home context, in which case the learner’s horizons of possibilities for their future will be narrowed (Meaney & Lange, 2012 forthcoming). An Indigenous group “may well recognize that schooling provides the skills necessary to survive in a technological world, but it will also blame the school for alienating students from their home culture, whether deliberately or unintentionally” (Cantoni, 1991, p. 34).

IDENTITY

Adapting to a context – assimilating and accommodating to invoke Piagetian notions – requires effort, “work”, not only in adapting to a different physical architecture, but, in terms of identity, more importantly in adapting to a different social (positioning, hierarchy, power, agency, language) and body-mind (psychological) “architecture”.

The etymology of identity probably goes back to Latin identidem meaning repeatedly, a contraction of idem et idem, same and same (Mariam-Webster Dictionary (online)). Hence, meaningful notions of identity have to reflect what is repeated, what is the same, of a person, a body-mind, across contexts.

While being very critical of definitions of identity that rely on expressions about “who one is”, Anna Sfard and Anna Prusak (2005), in arguing for their strictly
discursive definition of identity, recognised the psychological need for speaking about constancy, sameness, in the processes of change in lived lives.

Why this overpowering proclivity for “is-sentences”? Paradoxically, the reason may be exactly the same as the one that formerly evoked our concern: We cannot do without the is-sentences because of their reifying quality. Our relations with the world and with other people change continually, sensitive to our every action. Metaphorically speaking, identifying is an attempt to overcome the fluidity of change by collapsing a video clip into a snapshot. The use of is-sentences, which do the job of “freezing the picture” and turning properties of actions into properties of actors, is grounded in the experience-engendered expectation—indeed, hope—that despite the process of change, much of what we see now will repeat itself in a similar situation tomorrow. Based of this assumption, identity talk makes us able to cope with new situations in terms of our past experience and gives us tools to plan for the future. (p. 16)

Jessica Bishop (2012) gave a comprehensive overview on notions of identity in research literature. On this basis, she defined identity in terms of social position and “who one is” in a given community:

“I define identity as a dynamic view of self, negotiated in a specific social context and informed by past history, events, personal narratives, routines, and ways of participating. An identity is who one is in a given community and, as such, both individually and collectively defined.” (p. 38; italics in original)

In a similar manner, she took mathematics identity to mean

“the ideas, often tacit, one has about who he or she is with respect to the subject of mathematics and its corresponding activities. ... This includes a person’s ways of talking, acting, and being and the ways in which others position one with respect to mathematics. ... Identity is situated; learned; stable and predictable, yet malleable; and is both individual and collective” (p. 39).

Substituting community with context, identity then is a question of “who one is” in a given context. Transitioning between contexts involves different forms of “who one is”. However, it is not clear in Bishop’s otherwise thorough analysis of her data how students in psychological terms manage enactments of different identities.

James Paul Gee (2000) defined identity in term of performances in society not unlike Bishop (2012) (which is not surprising given that Bishop among others has Gee as a source inspiration) but further made a distinction between such multiple identities and core identity:

The “kind of person” one is recognised as “being”, at a given time and place, can change from moment to moment in the interaction, can change from context to context, and, of course, can be ambiguous and unstable.

Being recognized as a certain “kind of person”, in a given context, is what I mean here by “identity”. In this sense of the term, all people have multiple identities connected not to their “internal states” but to their performances in society. This is not to deny that each of
us has what we might call a “core identity” that holds more uniformly, for ourselves and others, across contexts. (p. 99)

Ways of being in the world, being a certain “kind of person”, happens in social groups and at least in some instances is a matter of choice.

Since reading and thinking are social achievements connected to social groups, we can all read and think in different ways when we read and think as members (or as if we were members) of different groups. … Any specific way of reading and thinking is, in fact, a way of being in the world, a way of being a certain “kind of person,” a way of taking on a certain sort of identity. In that sense each of us has multiple identities. Even a priest can read the Bible “as a priest,” “as a literary critic,” “as a historian,” even “as a male” or “as an African American” (priest, literary critic, historian, or ethnic group member), even if he chooses to privilege one way of reading–one identity–over another. (Gee, 2003, p. 3)

Unlike many other writers on identity, Gee is clear about the relationship between different identities. It is not only that different identities are enacted at different times and locales (teacher in the morning at school, consumer in the afternoon in the supermarket, parent in the evening at home, and lover at night in a bedroom) but also that in situations where more identities could be enacted you may privilege one to others.

CORE IDENTITY

In a study of a group of college women’s multiple dimensions of identity, Jones and McEwen’s (2000) found that the participants distinguished emphatically between their multiple “outside identities” and their core “inner identity” which they kept to themselves.

The core was frequently described by participants as their “inner identity” or “inside self” as contrasted with what they referred to as their “outside” identity or the “facts” of their identity. Outside identities were easily named by others and interpreted by the participants as less meaningful than the complexities of their inside identities which they guarded and kept close to themselves and made less susceptible to outside influence. The words these women used to describe their core included intelligent, kind, a good friend, compassionate, independent. They resisted using terms that conveyed external definition and identity categories to describe their core sense of self. To these young women, labels lacked complexity, accuracy, and personal relevancy. They believed that labels rarely touched the core of an individual’s sense of self. For them, individual identity was experienced and lived at far greater depth than such categories suggested or permitted. (p. 408-409)

Studies like this suggests that a viable notion of identity as a research tool in (mathematics) education need to account for people’s expressed sense of core identity in the flux of “outside” multiple identities.
Contrary to other writers, Gee (2003) recognised the psychological “materiality” of having multiple identities by pointing out that a person’s multiple identities are kept together by the body and a core identity:

This [having multiple identities] does not mean we all have multiple personality disorder. We each have a core identity that relates to all our other identities (as a woman, feminist, wife, ethnic of a certain sort, biologist, Catholic, etc.). We have this core identity thanks to being in one and the same body over time and thanks to being able to tell ourselves a reasonably (but only reasonably) coherent life story in which we are the “hero” (or, at least, the central character). But as we take on new identities or transform old ones, this core identity changes and transforms as well. (p. 4)

The inherent temporal dimension of core identity, Gee (2000) addressed by seeing core identity as combination of a trajectory in Discourse space and its narrativisation. Discourse with a capital d is defined as “socially accepted associations among ways of using language, of thinking, valuing, and interacting, in the ‘right’ places and at the ‘right’ times with the ‘right’ objects ... that can be used to identify oneself as a member of a socially meaningful group or ‘social network’” (Gee, 1999, p. 26).

Discourses can give us one way to define what I earlier called a person's "core identity." Each person has had a unique trajectory through "Discourse space." That is, he or she has, through time, in a certain order, had specific experiences within specific Discourses (i.e., been recognized, at a time and place, one way and not another), some recurring and others not. This trajectory and the person's own narrativization (Mishler, 2000) of it are what constitute his or her (never fully formed or always potentially changing) "core identity." The Discourses are social and historical, but the person's trajectory and narrativization are individual (though an individuality that is fully socially formed and informed). (Gee, 2000, p. 111)

Context and Discourse have much in common. Children’s transitioning between contexts constitutes their trajectory in Discourse space – or part thereof. Therefore, children, who transition between the context (Discourse) of school mathematics and other contexts (Discourses), need to tell coherent life stories that integrate the narrative counterparts of their lived experiences (Sfard & Prusak, 2005) in these contexts into a sufficiently coherent whole and with sufficient temporal continuity.

IDENTITY WORK

Depending upon the compatibility of the systems of knowledge and social practices constituting the context of school mathematics and other important contexts for children such as home, the formation of a coherent life story may require more or less effort on part of the children. Transitioning between contexts involves identity work because the adaptation (assimilation, accommodation) to different contexts involves dealing with questions of “who am I” and “who do I want to be”, or in Gee’s terms, as what “kind of person” am I recognised or do I want to be recognised. With reference to Sfard and Prusak’s (2005) narrative definition of identity, the question is what narratives are reifying, endorsable and significant in each context, which
narratives are the same and which are different across contexts. It takes effort on part of the identity builder to form “snapshots” that are reifying (transform stream of events into “things”); to select or decide stories for endorsement; and to make decisions about which stories count as significant. Further it requires work to form designated identities, that is, hopes, dreams, desires, and intentions for identities to be actual in the future. In the case of contradicting narratives, especially when relevant to the same context, it takes energy to resolve the conflict sufficiently to allow for maintaining the cohesion of the life story. This process of identifying is what I call identity work.

Bishop (2012) studied enactment of identity in a mathematics classroom and saw every communicational move as affording an opportunity for participants to negotiate their identity. Her explicit emphasis was on “the work accomplished through discourse during human interaction and communication” (p. 44). From my definition, enactment of identity would count as identity work.

Using the idea of one body “housing” a core identity allows for a slightly different description of identity work involved in transitioning between contexts. Moving the body from one context to another implies calling to the fore another identity according to the new context. This, however, does not do away with other identities “residing” in the body, which makes the physical transition from one context to another. The context of school mathematics may bring forward, and certainly is expected to do so, a child’s identity as a school student in a mathematics classroom while some of the child’s other identities, such as football player and daddy’s darling, fade into the background of their awareness. Other identities, such as belonging to an ethnic minority, may not so easily fade away, but rather become contextualised in another way. The point here is that none of the identities have disappeared. They are part of the “trajectory in Discourse space”, and, at the end of the day, all of them have to lend themselves to the narrativisation of a “reasonably coherent life story”. Telling this life story is identity work and the effort required depends on the contexts to be transitioned. The more aligned the contexts are in their systems of knowledge and social practices, the less effort is required to form a coherent narrative. The more different the contexts are, the more unaligned are the identities, “the kinds of persons”, that goes with them, and that, because of the one body “living” them, all need to be brought into some sort of narrative cohesion. While adapting to different contexts always involves learning (Meaney & Lange, 2012 forthcoming), it may be that incompatible differences between contexts make such demands on the transitioning child’s reflective capacity that little is left to engage in the Discourse of the context.

IDENTITY WORK AND LEARNING

Some mathematics education researchers discuss mathematic learning in terms of identity. In an article outlining possible fields for collaboration with literacy researchers, Paul Cobb (2004) identified students developing “a sense of affiliation with mathematical activity” and their “emerging identities” as such promising fields.
Students’ development of a sense of affiliation with mathematical activity and thus the cultivation of what might be termed their mathematical interest is essential to the success of a design experiment. 

A central issue for mathematics educators concerns the process by which students’ emerging identities in the mathematics classroom might, over time, involve changes in their more enduring sense of who they are and who they want to become. (p. 336, italics in original)

An “enduring sense of who they are who they want to become” is another expression for “core identity” and Cobb pointed to this concept of Gee’s (2000; 2003) as being “of critical importance” in the collaborative endeavours he envisioned.

From studying learning involved in video games, Gee (2005) distilled learning principles that unequivocally connected deep learning, which can be taken to be the kind of learning that Cobb wanted to happen in design experiments and saw as requiring “a sense of affiliation”, with development of identity, that is, ways of knowing and acting characteristic of practitioners in an academic area.

Principle: Deep learning requires an extended commitment and such a commitment is powerfully recruited when people take on a new identity they value and in which they become heavily invested – whether this be a child ‘being a scientist doing science’ in a classroom or an adult taking on a new role at work. (Gee, 2005, p. 7)

School is often built around the ‘content fetish’, the idea that an academic area like biology or social science is constituted by some definitive list of facts or body of information that can be tested in a standardized way. But academic areas are not first and foremost bodies of facts, they are, rather, first and foremost, the activities and ways of knowing through which such facts are generated, defended, and modified. Such activities and ways of knowing are carried out by people who adopt certain sorts of identities, that is, adopt certain ways with words, actions, and interactions, as well as certain values, attitudes, and beliefs. /...

Ironically, when learners adopt and practice such an identity and engage in the forms of talk and action connected to it, facts come free – they are learned as part and parcel of being a certain sort of person needing to do certain sorts of things for one’s own purposes and goals (Shaffer, 2004). Out of the context of identity and activity, facts are hard to learn and last in the learner’s mind a very short time indeed. (Gee, 2005, p. 8)

If deep mathematics learning, relational understanding in Skemp’s (1976) term, is what mathematics education should aim at, then Gee’s analysis seems to suggest that policy makers and curriculum authors have to let go of primarily conceiving of school mathematics in terms of content. Instead they should focus on developing contexts for school mathematics in which “fact comes free” with the identities of such the context. This is truly a daunting task given present day policy trends. However, the research reported in Meaney and Lange (2012 forthcoming) gives some indication of what these contexts might look like. Such contexts could ease the identity work load and hence possibly facilitating children’s transitioning between contexts.
**METHODOLOGICAL CONSIDERATIONS**

Gee (2000) described four intertwined perspectives on identity. Each is characterised by a process, a power, and a source of the power through which the process works. They are summarised in table 1.

**Table 1: Four ways to view identity. Reproduced and elaborated from Gee (2000)**

<table>
<thead>
<tr>
<th>Label</th>
<th>Perspective</th>
<th>Process</th>
<th>Power</th>
<th>Source of power</th>
<th>(Extreme) Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Identities</td>
<td>1. Nature-identity: a state</td>
<td>developed from</td>
<td>forces</td>
<td>in nature</td>
<td></td>
</tr>
<tr>
<td>I-Identities</td>
<td>2. Institution-identity: a position</td>
<td>authorized by authorities</td>
<td>within institutions</td>
<td>Calling</td>
<td>Imposition</td>
</tr>
<tr>
<td>D-Identities</td>
<td>3. Discourse-identity: an individual trait</td>
<td>recognized in the discourse/dialogue</td>
<td>of/with &quot;rational&quot; individuals</td>
<td>Ascription</td>
<td>Achievement</td>
</tr>
<tr>
<td>A-identities</td>
<td>4. Affinity-identity: experiences</td>
<td>shared in the practice</td>
<td>of &quot;affinity groups&quot;</td>
<td>Institutionally sanctioned</td>
<td></td>
</tr>
</tbody>
</table>

A preliminary re-analysis of the data analyses in earlier work (Lange, 2007; 2008b; 2008a; 2009; Lange & Meaney, 2010; Lange & Meaney, 2011) suggests that the contexts between which 10-11 year old children typically transitioned included home (family life), school teaching, school leisure (non-teaching times and spaces such as breaks and school day-care), leisure (out-of-school). Their futures were also contexts for identity work. Theoretically, this is supported by Cobb’s (2004) taking “who they want to become” as identity, Sfard and Prusak’s (2005) distinction between actual and designated (hoped-for) identities and Ole Skovsmose’s (2005) pointing to students’ foreground as strongly involved in forming students’ learning intentions.

Gee’s perspectives on identities can be combined in a matrix with these contexts. In this matrix identities can be placed in relation to the context in which they are “active”. Table 2 sketches some possible context-identity pairs.

**Table 2. Identities versus contexts with some examples**

<table>
<thead>
<tr>
<th>Identity</th>
<th>Context</th>
<th>Home / family</th>
<th>School (teaching)</th>
<th>Leisure at school (breaks a.o.)</th>
<th>Leisure out of school</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-identities</td>
<td>Child, sibling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-identities</td>
<td>Student</td>
<td></td>
<td>Younger/older (“smaller”)/&quot;larger&quot;)</td>
<td></td>
<td></td>
<td>Education Job</td>
</tr>
<tr>
<td>D-identities</td>
<td>Good classmate</td>
<td></td>
<td>Friend, playmate,</td>
<td></td>
<td></td>
<td>Friend, playmate</td>
</tr>
<tr>
<td>A-identities</td>
<td>Counter strike-player</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Playstation player</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
This matrix is meant to serve as a theoretical-methodological lens for identifying and analysing in detail the identity work involved in children’s transitioning between school mathematics contexts and other important contexts as well as inspire the mathematics education community to also take a serious interest in mathematics learners’ transition out of, and not only into, school mathematics contexts.

REFERENCES
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