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**Intergenerational learning in and around the home setting: who are the learners
and how do they learn?**

John Jessel

Goldsmiths, University of London, England

Correspondence concerning this paper should be addressed to: John Jessel,

Department of Educational Studies, Goldsmiths, University of London, London, SE14

6NW, UK, j.jessel@gold.ac.uk

Running Head: Intergenerational Learning

Children spend a relatively large amount of time in and around the home setting, where intergenerational encounters may contribute to their learning. As a result of demographic and societal changes, vertical links within families between children and their grandparents could become very important. This may particularly apply where grandparents have moved to join their families who have migrated and where they could play an important role with regard to intergenerational learning. To investigate the nature of intergenerational learning exchanges young children with Sylheti/Bengali-speaking grandparents or monolingual English-speaking families of mixed ethnicity living in East London were recruited. Case studies of the families were conducted through interviews, observation, video-recordings, and scrapbooks. A qualitative analysis examined the patterns of learning interactions and the kinds of knowledge exchanged. Findings suggest that children and their grandparents take part in a wide range of activities where learning interactions are co-constructed within a relationship of trust and security, and where all participants contribute and learn. A wide range of concepts and skills was developed through intergenerational learning. The findings are discussed in relation to different notions of generation, and in relation to learning perspectives summarized as a framework representing learner agency and social engagement.

INTRODUCTION

Contemplating the notion of intergenerational learning, even if only for a moment, brings with it a number of basic questions. For a start, who are the generations and what kinds of learning might arise? The mix of people among which learning may take place is, of course, potentially complex, particularly in an era characterized by increasing geographic mobility and changing social factors that may impact on the nature and the make-up of settings such as the home, the school, and the workplace. In all of these settings, we may be mutually exposed to differences in ways of seeing and doing things, and differences in knowledge and perspectives on the world around us. To investigate this further, and with a particular emphasis on learning where children are involved, I will firstly examine the notion of ‘generation’, before considering some implications for the nature of any learning that may occur. I will then discuss aspects from a body of data collected from a study examining interactions between generations that took place in and around varied home settings.

GENERATIONS

In their review of the literature on intergenerational learning, Gadsden and Hall (1996) have noted divergent opinions around the term ‘generation’. For example, in terms of kinship, a widely understood meaning of the term ‘generation’ as a result of biological reproduction relates to a person’s position in family lineage, such as grandparent, parent, and child (e.g., Hagestad, 1981). Although age can be linked with lineage, this could be misleading in that position in family hierarchy alone may not reflect age. Acock (1984) uses the term ‘rank descent’ to refer merely to position in family hierarchy, while, more generally, ‘cohort’ has been used to refer to groupings where age may be a factor. For example, a cohort could refer to ‘those people within a

geographically or otherwise delineated population who experienced the same significant life event within a given period of time' (Glenn, 1977, p. 8). Similarly, Gadsden and Hall (1996) have used 'generation as cohort' to refer to a group of people that could be of a similar age but, more importantly, experience events or a set of circumstances in similar ways. A key point here is that generation is not a linear concept: knowledge is not necessarily directly related to age but more to do with variety of experience. Another term offered by Acock (1984) is 'generation as *zeitgeist*' which relates to those sharing the same politics, values and art, such as the 'hippy' generation, which is distinct regardless of age or position in family lineage. More recently, Brătianu and Orzea (2012) have used the term 'knowledge generation' to refer to the skills and knowledge content a group may have at a given time. The examples they give include a generation of farmers or a generation of maritime personnel, but, of course, there are other knowledge generations, such as an IT generation, that are widely relevant today and could have implications for learning. The home settings described below bring together family members including children, their parents and grandparents. In this sense, generation can be characterized in terms of a lineage. However, in view of the different cultural backgrounds and ways of life, particularly in the case of the participating grandparents who later in life moved from their home country to join their families, the notions of generation as cohort, *zeitgeist*, and the knowledge they bring also have relevance.

GENERATIONS AND LEARNING

In spite of different views on what a generation is, throughout history one's position within a family structure has remained a visible manifestation of the concept of generation. Parents, for example, have been seen as distinct from their children, and in

turn grandparents represent another step removed. In terms of what is learned intergenerationally, one common assumption is that there is an inherited body of knowledge and wisdom that continues to be ‘passed down’ through the generations. In terms of the way learning takes place, younger generations learn *from* older generations and although other approaches would be possible, learning primarily takes place through transmission; the learner as a passive container being filled with knowledge from an expert (e.g., Greene, 1986). A further assumption might be that the body of knowledge and wisdom passed down would be seen as relatively stable and unlikely to change significantly over the lifetime of the generations involved. It might also be assumed that what is passed down is of value to succeeding generations that remain within a given culture, where the norms and understandings and skills form a continuing, relevant, and needed currency.

However, in a world marked by demographic change with relocation across geographically and culturally distant regions, and by social changes such as high divorce rates and a large proportion of single-parent families, many young people may not be exposed to a predictable lineage of family members, and extended generational encounters may also be extrafamilial (Newman & Hatton-Yeo, 2008; Jessel, 2009). In addition, if we regard advances in science and technology to be relatively rapid, then older generations may not be able to provide many of the skills and knowledge that succeeding generations need. In terms of intergenerational learning, then, a simple transmission model may not always be applicable.

LEARNING: SOME PERSPECTIVES

Three broad characterizations of learning identified by Greeno, Collins, and Resnick (1996) move from the ‘associative’ and ‘cognitive’ that focus more on the

individual, to a 'situative' perspective that considers social practice as an important part of the learning process. The transmission model described above might be regarded as associative with learning being largely dependent on the teacher (or elder family member) telling or showing. Thus, where basic skills and knowledge items are built up in memory through rehearsal or repetition, new associations are formed as this process continues towards more complex learning (Schunk, 2012). In contrast to approaches that are associative in nature, the cognitive perspective is concerned with qualities of mind such as thinking, understanding, reasoning, and concept formation. Learning, from a Piagetian perspective, could be seen as arising as a result of interactions with the world around using existing mental structures and developing new ones.

Whilst intergenerational learning could include associative and cognitive principles, these alone would overlook the fact that it occurs in a social context. Indeed, the significance of 'scaffolding' (Wood, Bruner, & Ross, 1976), where one party takes a guiding role to help another, exemplifies the social nature of learning. However, this characterization of learning suggests that there is one person – often the child – who is less experienced and who is supported by someone more experienced. This places the child in a relatively passive role (Stone, 1998). The importance of a more symmetrical relationship needed for effective scaffolding has been voiced by Rogoff (1990), who has discussed how the learner collaborates rather than merely being guided by another. The family setting provides an example of a situation in which parents (and other carers) and their children have a greater opportunity for joint interaction. As a result, children and their carers engage in 'guided participation' through which shared understandings are reached (Rogoff, 1990). Further features inherent in the family setting include mutual trust (Rommetveit, 1974, 1979) and the

extent to which individuals identify with activities that are particularly valued by a culture (Goodnow, 1990).

To emphasize the role of social interaction in learning, such as that which occurs in families and intergenerational learning, Mercer (2013) draws on a sociocultural perspective emanating from Vygotsky's (1962, 1978) work in which he developed a theoretical framework describing the relationship between collective thinking and joint activity, or the 'intermental', and the development of individual cognition, referred to as the 'intramental'. Mercer offers three mechanisms to account for the effects of joint activity. Firstly, through 'appropriation', problem-solving strategies and explanatory accounts of these can arise from using language to share knowledge whilst a joint task is undertaken. Secondly, through 'co-construction', a collective intelligence is invoked through sharing ideas and arguing productively about them and through this more can be achieved than might be from individuals acting alone. Thirdly, individual reasoning may be 'transformed' through group discussion and argument, which can encourage metacognition and critical awareness from exposure to different points of view.

Transformation as a mechanism can also be linked with the notion of dialogism developed by Bakhtin (2004), where ideas are mutually created and tested among participants and no voice is superior to another (Vaagan, 2006). The term 'participation' has also been used to emphasize learning that occurs through taking part and being a part of a community (Sfard, 1998) such as a family. Similarly, a community of practice (Lave & Wenger, 1991; Wenger, 1998) is based upon a community of people interacting and sharing activities over a period of time within a domain of shared interest to which they are committed. Through this they learn together, developing a shared repertoire of resources using each other's experience.

A SUMMARY FRAMEWORK

These perspectives on learning have been summarized diagrammatically in the form of a framework originally designed to show different types of learning activity and different levels of social engagement (Jessel, 2011, 2012). An adaptation of this is given in Figure 1. The types of learning activity set out along the horizontal axis can be aligned with the associative and cognitive perspectives mentioned above. These move from a position where the learner can be regarded as having less freedom or agency within a given activity towards having more agency. Although many other types of activity could be positioned along this axis, the intention is only to give a rough indication of some general possibilities.

Figure 1 about here

While each type of activity on the horizontal axis could be carried out by learners individually, the framework allows for the different levels of social engagement summarized above. These move from the individual (at the bottom of the vertical axis) through scaffolding towards dialogical and participatory arrangements.

An activity can be positioned within the space between the two axes according to its nature and, in turn, the agency it allows for the learner as well as the extent of social engagement. A further consideration is that activities often take place in relation to some kind of object or entity that could present itself in a variety of forms. These could include a text such as a story, an idea or topic, a tool, or a physical object of some kind. For example, a story could be an object for memorization, an object for reflection or discussion, an object for adaptation, or the starting point for some form

of creative transformation such as a painting or piece of music or another story. In other words, the kind of activity and the kind of learning need not be governed by the nature of entity around which an activity takes place; instead, it is how that entity is used, and by whom, that is crucial. In the same way that a story can be reflected upon by an individual, it can be considered similarly through group discussion. Equally, some form of creative transformation could be carried out individually or collaboratively.

The framework is not intended to be prescriptive; one kind of learning activity is not intended to be judged as more worthy than another, and neither is the merit of one learning perspective intended to be judged against another. The intention is only to give an indication and draw attention to various possibilities and the extent to which they can be pursued.

Settings for intergenerational learning

Although formal educational settings such as mainstream schools could allow intergenerational interaction, in comparison to other settings, this will necessarily be restricted in view of the relatively high proportion of children to adults. Also, given the relatively small amount of time spent in school (Sosniak, 2001), the occurrence of intergenerational learning outside of the classroom merits further investigation.

The home setting, for many children, may dominate as far as intergenerational encounters are concerned. However, notions such as 'home' and 'family' may need to be reconsidered in view of the demographic and societal changes noted above. For example, vertical links within families such as with grandparents could become particularly important, especially where populations are aging. The role of grandparents may also become more prominent following migration where children

of newly arrived parents, who may have little time for childcare, spend time with grandparents who have also migrated to join the family.

Consideration of these types of situations led to a study on learning in and around the home, where the focus was on children and their grandparents, particularly within families where grandparents had moved to join their families who had migrated and could play an important role with regard to intergenerational learning (Jessel, 2009; Jessel, Kenner, Gregory, Ruby, & Arju, 2011). The work is summarized in the sections below and findings relating to the above learning perspectives are discussed.

Intergenerational learning between children and grandparents in and around the home

This study focused on the exchange of knowledge and skills between young children and their grandparents in Sylheti/Bengali-speaking¹ families of Bangladeshi origin, and monolingual English-speaking families living in East London. The children were aged between three and six and were just beginning school; the assumption being that children in this age-range would be reliant on help and care provided by the family, including their grandparents. The children from the families of Bangladeshi origin were born and had grown up in England, speaking English amongst themselves but being familiar with other languages, while their grandparents had usually emigrated later in life and continued to speak Bengali. In these respects, generation was not simply a function of age or lineage, but could also be indicated by distinct geography and cultural values.

With a view to investigating intergenerational learning in the home setting, the main research questions were:

- In what ways do grandparents and children take the lead in learning interactions?

- In what ways are the learning interactions co-constructed by the participants?
- What kinds of knowledge are exchanged between younger and older learners?
- What is the role of the computer in cultural, linguistic and technical aspects of learning?

The latter question was raised because it was thought that a technology such as the computer might have a particular appeal to young children and generate a sense of confidence which would be of interest in terms of any learning encounters.

METHOD

Contact with children and their families was made through links with a local primary school in East London. The researchers, who were Bengali- and English-speaking to facilitate conversations and interviews, had worked in the school before, during and after the school day, and were thus able to make regular and frequent contact with children, teachers, parents and grandparents (who often took their grandchildren to and from school).

An ethnographic approach was used with nine families (six Sylheti/Bengali-speaking and three monolingual English-speaking). With both the Sylheti/Bengali- and English-speaking families, an 'inside' perspective was sought, with the researchers spending extended periods of time with the families as varied activities took place. This included interviews with grandparents and children about how they learn together, as well as video recordings of events in and around the home such as cooking, gardening, storytelling, and computer activities. Scrapbooks were created by the children and grandparents to show what they enjoyed doing together. Through asking the families to observe the video recordings and provide their own commentary on the events shown, scope for triangulation was provided.

Analysis of the data from the nine families involved in the ethnographic case studies was carried out in relation to the research questions to explore patterns of interaction and the kinds of knowledge exchanged. To this end both verbal and multimodal transcripts were made of the video recordings. The latter allowed detail on how participants built on each other's meanings both verbally and non-verbally, through showing visual semiotic modes such as gaze, gesture, and other actions in addition to information conveyed aurally.

FINDINGS

Of the nine families studied, the children either lived in the same house as their grandparents and were in contact with them each day, or had grandparents living within 5 miles and thus saw them regularly at weekends or during the week. Because parents were working or having to attend to the needs of very young siblings, grandparents played an important part in looking after the children, including accompanying them to and from school.

Activities reported by the grandparents

In addition to activities that were directly observed, activities reported by grandparents in the interviews were wide-ranging both within and across families:

'Shopping, cooking, religious activities, going to the park, visiting others, gardening [on the balcony], reading, telling stories, singing and rhymes together, getting them ready for school, taking them to school, doing school work with them, watching TV/videos, playing, sports, doing housework with them, eating out, talking about members of the family and family history: English' (Grandmother of Steven, aged 6);

'Storytelling, playing, babysitting go to the park, she plays on TV games and asks me to help' (Grandfather of Abida, aged 4);

'Crafts, exploring the natural world, gardening, reading, theatre, films, walks, cooking, visiting historic buildings, using the computer for fact finding and games, making scrap books, painting, trips to the ballet as a special treat'.

(Grandmother of Lizzie, aged 6, and Sam, aged 4).

The range of activities was similar regardless of frequency of contact or whether the children and their grandparents lived together or apart. While activities such as reading, telling stories, and making scrapbooks were for the benefit of the children, other activities such as cooking and gardening were part of the family routine. In particular, visiting others and family history featured prominently in families who were of Bangladeshi origin.

Children's learning: the grandparents' view

The interviews also included questions to the grandparents on what they thought their grandchildren learnt from them:

'I like to take him to the park , particularly to the city farm, I like him to see and learn about animals, they don't see them here living in the city, they should experience life and enjoy, learn about everything' (Grandmother of Anayat, aged 5);

'He's learning skills, to make bread, counting, measuring' (Grandmother of Steven, aged 6);

'When I came back from Bangladesh I talked to him about it, told him about what it looks like, about other family members, so hopefully when he goes

there he will know and be familiar with Bangladesh' (Grandmother of Anayat).

A particular theme emerged from the interviews with grandparents from Bangladesh that could be linked to the notion of generation as *zeitgeist*, where a generation shares values or ideals. Coupled with this was an assumption about learning in terms of knowledge to be passed on:

'I believe it's important to pass on religious teachings, about our way of life to the children... he's a bit too young to understand but he will learn'

(Grandmother of Anayat);

'We pass on a lot to them, our wealth; they will take care of it and enjoy it. We tell them stories of Bangladesh, how we live there, what we grow, what we eat, how we do things, our history, our lives, about our relatives, they've been there, and they loved it' (Grandmother of Sumayah, aged 5);

'Adab and kaida [religious texts] and our culture, family history and relationships with family members' (Grandfather of Abida, aged 4).

Learning: the children's view

Some of the children's comments on their own learning, although brief, were also noted. These reflected some of the activities noted above: *'I watch CBBC with Granny. I learn new words from it'* (Steven, 6); *'Cooking, role playing and I'm the teacher'* (Abida, 4). Activities relating to heritage language and culture were also reported by the children. For example, Sumayah (5) commented: *'We watch Bangla TV together'*; *'I like reading my Kaida [Qur'an] with my Bubu²'* [grandmother].

Children teaching and grandparents learning

Running Head: Intergenerational Learning

Though there were instances in which the grandparents seemed to be teaching the children, there were also occasions in which the children appeared to pass information to the grandparents. Sumayah drew attention to a role that was common with other children in Sylheti/Bengali-speaking families: *'We teach them English [...] they don't know how to spell 'mum' so we say to them M...U...M.'* This teaching role was also acknowledged by the grandparents from other Sylheti/Bengali-speaking families: *'He tries to teach me English, doesn't like the way I pronounce certain words'* (Grandmother of Anayat, aged 5); *'I learn English pronunciation, when we go shopping she shows me western food, what she has at school, and helps me buy what she likes.'* (Grandmother of Anayah, aged 5). The teaching role was also apparent in the monolingual English-speaking families: *'Oscar has got to read, he takes charge. If I say a word he says 'That's wrong Grandad.'* (Grandfather of Oscar, aged 4, and Cosmo, aged 3); *'Football, how to play in the park'* (Grandmother of Steven, aged 6). More generally, the grandparents of the different families were also willing to voice what they had learnt from their grandchildren: *'They introduce me to new things and new ways. Things have really changed. I find it interesting how he plays cards on the computer, when I used to play as a group manually'* (Grandmother of Sahil, aged 6); *'To keep enjoying experiences in life and to keep questioning things.'* (Grandmother of Lizzie, aged 6, and Sam, aged 4).

The learning relationship: talk, touch, security and comfort

Finding time to talk, either about family members, family history, or through activities such as telling stories, singing, and rhyming together featured strongly in daily life. Talk pervaded many of the activities as evident from the video transcripts and comments such as:

'We sit together as a family and talk a lot, we laugh, tell stories' (Sumayah's grandmother);

'Storytelling, playing, babysitting, she sleeps with us, we go to the park. She talks about what she does at school and discusses things with us' (Abida's grandfather).

A sense of security and comfort was also conveyed in the grandparent-grandchild relationship: *'They fill our hearts with love and belonging'* (Anayet's grandmother) that was compared to the parent-child relationship: *'[We] show a different sort of love'* and that children *'get a sense of security and comfort from us'* (Sumayah's grandmother). This affective quality in the relationship could also be supportive during exploratory talk and freedom of expression. This has been regarded as an important component underlying scaffolding (Wood, Bruner, & Ross, 1976). In other words, children can benefit from the sense of security they have with their grandparents, which in turn provides a safe, supportive learning environment.

Touch

From the multimodal data, touch was found to play a number of significant roles. At one level, it affirmed the grandparent-child relationship, such as when Lizzie (aged 6) rubbed her cheek on her grandmother's arm while at the computer. Similarly, Steven's (aged 6) grandmother used touch to enable him to stir dough when it became too stiff. Abida's (aged 4) grandfather shadowed his granddaughter's hand movements as she moved over the computer keyboard to press keys. Touch also acted as a means of guiding and was found to occur frequently, such as in an episode where Razia showed her grandson Sahil (aged 6) how to write down a Bengali letter. She placed her hand over his and guided him while he copied it. A few minutes later they

then began to write English letters. The letter 'A' was not being well formed so Sahil began to take the lead (Bengali speech transliterated):

Sahil: *Ata 'A' na.* [This is not 'A'.]

Razia: *Asho ami dei na tomake.* [Come let me show you.]

Sahil: *Airokom.* [Like this.]

Sahil then pulled his hand away and, refusing any more assistance, wrote a well-formed letter 'A'. Shortly afterwards he set up the game 'Solitaire' on the computer. This involved using a mouse to move images of cards on the screen. Although Razia was familiar with group card games she used to play in Bangladesh, she was neither familiar with solo games, such as Solitaire, nor with ways of manipulating the mouse to move the cards. In Table 1, Sahil shows his grandmother how the game works and offers her a turn: *'I know...you do it'*, placing his hand over hers to help her guide the mouse and indicating that she should click the left mouse button. The transcript shows an interplay between their hands as Sahil takes charge of the mouse and Razia tries to take it back. Sahil eventually gives the mouse to Razia before taking it again in order to demonstrate how to drag and drop the cards. At the same time he comments verbally to indicate where a card can be placed in order to play correctly.

Table 1 about here

In this situation, Sahil takes on the role of an expert and speaks with confidence when giving his grandmother instructions in Bengali. This more reciprocal relationship in intergenerational learning, with children and their grandparents acting as teachers as well as learners, was acknowledged in the interview with Razia. Of course, the skills

exchanged between Sahil and Razia are different in kind, but the point here is that there are moments where the grandchild as well as the grandparent take the lead.

In view of the different perspectives on ‘generation’ outlined earlier, this episode could also be seen as an example where family lineage has an influence on the learning dynamic between members. In Razia’s case, this acts in one direction, but co-exists with Sahil being a member of what might be thought of as an ‘IT generation’, whereby the influence on learning acts in the reverse direction. This dynamic may also apply if generations are framed in terms of cultural experience.

Structuring and scaffolding

As well as touch, another facet of the learning relationship was evident from the video transcripts. In the extract shown in Table 2, Lizzie (6) is at home using the computer with her grandmother to find out more information about a moth that they had discovered in her grandmother’s garden. Having already looked up the moth on her grandmother’s computer and printed off what they had found for their scrapbook, they now wanted to see if they could find more information. Both Lizzie and her grandmother are familiar with using computers, and Lizzie is seated so that she can use the mouse and the keyboard. Although Lizzie conveys a sense of confidence, her grandmother has been helping her move the mouse more accurately. In the run up to the episode shown, her grandmother is able to help Lizzie locate the search engine: *‘...and we’ll go to Daddy’s favourites because I’m sure he’s got Google’*. Lizzie, however, is a step ahead in anticipating the use of the keyboard (which she moves into position, only for it to be returned to its original place before her grandmother realizes it would be needed). In this sense, then, skills are briefly shared. Lizzie attempts again to establish her intentions when she suggests that they should search

for butterflies instead of moths, though she settles for moths in the end. Lizzie, after agreeing, begins to type in 'moths' and her grandmother helps by with spelling, suggesting 'O', and then '*something else*', with Lizzie responding with 'T'. Lizzie then asks '*What comes after T?*', and her grandmother suggests the 'H' and 'S'. When 'moths' is finally typed in, a list of sites appears and we see in the extract how the choice of a suitable site is negotiated: Lizzie initially suggests an American site, that was unlikely to show the moth that they found, before her grandmother helps her to make a more suitable choice. Lizzie is initially correct when she points to the lower picture as a moth, but momentarily points to the upper picture, and, following the disagreement from her grandmother, settles back on her original choice. By the end of the extract, agreement is established, and Lizzie confirms trust in the relationship with her grandmother by rubbing her cheek affectionately against her grandmother's arm.

Table 2 about here

Following this extract, the episode continues with Lizzie choosing from the moth index that appears. Her grandmother makes a further suggestion: '*Erm, no, because it was a daytime moth and I think that's a night moth 'cos it's got 'Noct' like 'Nocturnal', doesn't it*'. They continue to look through the index for a few seconds until Lizzie's grandmother suggests getting the scrapbook with the printout of the Latin name that they had previously found. Lizzie continues to use the computer until her grandmother returns and is then able to help her to find the species and the particular moth. This guidance requires a range of experience and knowledge that Lizzie does not currently have, and she has been helped to accomplish a task that she might otherwise have not accomplished alone. Her grandmother has enabled this to

happen through negotiation, with Lizzie sometimes taking the lead rather than merely carrying out instructions.

Reading: more than one literacy practice

Although the description ‘reading’ could suggest a singular type of literacy practice, there were marked changes, even where the same child and grandparent were involved. This was exemplified in two video recorded episodes with Razia reading to Sahil. In the first instance, the reading material was a book that contained ‘choras’; rhymes with moral and religious overtones written in Bengali, illustrated with pictures popular among Bengali children. As with many other grandparents in the area who had relocated to join their family, Razia is a native Bengali speaker with some understanding of English, and, as was generally found, the reverse was the case for Sahil, with English being his stronger language. In her own childhood in Bangladesh, Razia was taught stories and choras: *‘They were mostly done orally and we learned them by heart. There was hardly any written text [...] we used to learn through repeating words and phrases’*, but, in contrast to this earlier experience, she became an avid reader: *‘I do enjoy reading books all the time, even when I am here I read all day. I have plenty of different types of books, yes, story-books, also Islamic books’*. Razia is conscious of her role in sharing the Bengali language and the cultural practices with her grandchildren, and reading a chora was an intentional and more formal mode of learning, where she lowered her voice using a more serious tone to signal this.

The reading took the form of a cycle of a few words at a time in Bengali being spoken by Razia with Sahil listening intently before repeating them. This was an established routine and Sahil took great care in how he voiced the words, giving

attention, for example, to whether the sound came from the throat or the nose, which part of the mouth was used, and how his cheeks were formed. All these can affect how pronunciation in Bengali is judged and Razia demonstrated, corrected, and supported continually as the session proceeded. The reading continued in this way and followed a traditional teaching pattern in Bangladesh, especially with new or unfamiliar material such as the chora. As Razia later explained in an interview, reading texts such as the chora provides familiarization with vocabulary and an opportunity to be inducted into the richness of Bengali, especially through the literary language where some of the words are less common.

In another reading session a very different pattern of interaction became apparent. The text, also written in Bengali, was the traditional European story 'Snow White', but this time Razia read in an ordinary manner rather than lowering her voice and did not require the same formality as with the chora. While she read, Sahil climbed over her and the sofa and wandered around the room along with his younger sisters, while nevertheless appearing to attend to the story. Razia, however, is aware of this change in style: *'I love it [the children climbing over her as she reads]. I don't want them just to sit straight. That's what grandchildren do: they play and learn'*. There is another factor in this learning relationship, namely that Razia is unfamiliar with the story: *'I did not hear it before. I learn these stories when I am with my grandchildren'*, and aware that Sahil already has greater knowledge of it in some respects through school and other contact with English culture. In view of this, she takes on a different approach and teaching style to the choras; she helps Sahil understand the story, rather than recite it, and to be able to discuss it her with her in Bengali: *'It helps them understand. They sometimes say: 'My teacher tells us what dadu [grandmother] tells us.' When I explain words and phrases to them, they*

understand better... I read the books first, then I read it to them. Not the whole book. I explain and make the language easy for them in children's language. They find the language difficult'. Through simplifying some of the Bengali in Snow White, Razia helped Sahil read and contribute to the interpretation of the words. While this kind of adjustment might be a characteristic of scaffolding, the contributions from child as well as the grandparent to the meanings in the text allow a joint encounter, which, even if only to a small degree, resonate with the notion of guided participation.

Learning through taking part in family practices

While some activities occurring within the home were primarily for the benefit of the child, others could be seen as distinct in that they were part of a routine for the family in general. For example, while at his grandmother's (Gloria) house, which he visited three or four times a week, Steven (aged 6) is stirring a cake mix. His grandmother is standing next to him and he has been learning how to add some of the initial ingredients and how to control and manipulate the wooden stirring spoon. The transcript, shown in Table 3, is drawn from a recorded activity that lasted nearly an hour during which they first made cakes and then some bread sticks.

Table 3 about here

The extract begins at the point when some eggs have to be cracked and their contents added and stirred in. This is a potentially difficult and complex task in that a technique needs to be developed with some precision so that the egg is opened in a controlled way, rather than demolished, and its contents separated cleanly from the shell and added to the mix. A degree of organization is also required so that the tools

(such as the scraper) are easily available at the right time and can be disposed of again but positioned for further use (such as the handle of the scraper being in the right place and angled in the right direction). Similarly, within this sequence, the empty shell has to be deposited in a suitable place. From the transcript, it is apparent that Steven is able to accomplish all this largely with success. Although it is evident that his grandmother played an important role in helping him, this was achieved in a way that was supportive but allowed Steven to take responsibility as a successful participant (cracking the egg himself and adding the contents to the bowl) rather than taking over the key parts of the activity herself. Even when there was a danger that some shell could have fallen into the mix, this was handled in a way that was friendly and supportive rather than critical. A feature of this extract that is striking, and quite typical of other episodes, is the minimal use of words. Much of the communication is through gesture, gaze, and tone of voice rather than verbal content. The fact that this kind of home situation afforded one-to-one exchanges and support within a relationship that carried warmth and trust, and where there was no particular pressure of time, contributes to some important qualities of learning occurring between these two generations in the home setting.

This 'authentic' quality inherent in many of the activities in and around the home setting was also exemplified by Sumayah (aged 5): *'I like to grow trees with Bubu and Dada [her grandmother and grandfather], like to go outside with both of them'*. In the following extract, which is part of a daily routine, Sumayah, her cousin (also aged 5), and her grandmother are in the small back garden belonging to their house in Tower Hamlets. The cousin arrives with a full watering can and the children take it in turns to water. The children and grandmother exchange a series of utterances when watering:

Cousin: *Khita?* [What?]

Grandmother: *Nitaini?* [Do you want to take it?]

Grandmother: *Na eta biza.* [No that one is wet.]

Cousin: *Eta ditai ni? Dilaou.* [Do you want to give it that one?]

This is a joint activity and lasts almost three minutes, during which any elaborate verbal content, again, is relatively minimal. However, other aspects of the context, including the truncated utterances, touch, and action together with what is visible, allow a complexity of information to be inferred: Apart from knowing when some plants should be watered, there is negotiation around how to hold the can and angle the spout, how far away to hold the can from the plant, where to hold the can in relation to the stem and the leaves, and so on. That information is not always transferred explicitly lies behind Rommetveit's (1974, 1979) notion of 'prolepsis'.³ This level of negotiation also carries with it an element of learner participation and joint problem-solving that Rogoff & Gardner (1984) contrast with explanation (talk about the task) and demonstration (a teacher merely showing how a task is performed). Importantly, knowledge, rather than being an absolute or isolated commodity that is transferred, can be seen as something that is at least in part co-created.

In many of the multimodal transcripts, such as those involving Steven in the kitchen and Sumayah in the garden, from the viewpoint of the participants, inferences had to be made and gaps in the logic filled so that a diversity of information could be combined into something coherent and with meaning. In relation to the horizontal axis on the framework shown in Figure 1, this moves the activity away from memorization towards the direction where creative leaps might be needed, indeed, even what might appear as simple transfer of information involves an element of creativity at a micro

level. There is also a sense in which knowledge, as jointly constructed and where meanings emerge and are negotiable, can be linked with Bakhtin's (1981, 2004) notion of dialogism. Here, the 'text', rather than being entirely verbal, includes other social and cultural practices.

The existence of a domain of shared interest such as cooking and gardening, together with a community of people who interact and develop relations over time and a practice where resources such as ways of handling typical problems are shared, largely fulfil the conditions necessary for the development of a community of practice as conceived by Lave and Wenger (1991) and Wenger (1998). In contrast to the classroom, any learning that takes place can also be regarded as informal and 'situated' (Brown, Collins, & Duguid, 1989) in a real life setting. This can give rise to a level of sophistication in learning that might otherwise not so easily be achieved. For example, regarding the amount of water needed by each plant or tree, Sumayah asked her cousin to water another part of the garden, '*Give there*', only to get the response '*It's too much*'. This concept of over-watering, and that some plants require less water than others, was also illustrated when Sumayah asked if they should water the '*potato trees*' (translated from Bengali) when her grandmother replied '*Yesterday we did it*'.

OVERALL SUMMARY AND CONCLUSIONS

A 'generation', as noted, is a concept that is open to varying interpretation. From a child's point of view, different generations are encountered within and without the family and provide a range of experience, knowledge, and values. Although age and family lineage may determine the nature of intergenerational

relationships, from the current data it was found that participants, including children themselves, could co-exist as members of different generations.

In this study, grandparents were found to play an important role in the wide range of activities in which they engaged with their grandchildren and in which learning took place. In the households studied, the grandparents expressed the view that, in comparison to the parents, the relationship between them and their grandchildren had a relaxed quality and carried a sense of security. Grandparents had time to talk and engage with the children. As part of this relationship, touch was frequently used to initiate and guide and support events, and could be regarded as a communicative mode as well as confirming the grandparent-child relationship. The security provided by this engendered confidence could have facilitated the variety of learning encounters observed. Interplay between touch and other communicative modes such as language, gesture, and gaze could also be seen as facilitating joint participation.

Many of the families studied were of Bangladeshi origin and Sylheti/Bengali speech was used by the grandparents with their grandchildren, even though they had some understanding of English. This provided opportunities for language learning, with regard to both the heritage language and English. The limited command of English provided scope for the children to take a lead in some learning interactions, with their grandparents leading on others. Some grandparents also used Arabic for religious activities such as prayer and recitation of the Qur'an. Activities such as story reading occurred primarily for the benefit of the children. With Sylheti/Bengali-speaking grandparents, this also provided an opportunity for teaching the language, using children's books written in Bengali. Reading activities were influenced by the kind of text that was used. Texts derived from the heritage culture often had religious

and moral overtones and were approached with a level of respect and seriousness. In these cases, the grandparents referred to their role in terms of ‘passing on’ knowledge and cultural practices, and from the video data intergenerational learning was based around memorization through oral recitation with great attention to detail in pronunciation. Here, the grandparent was the knowledgeable authority, and took the lead in the learning activity. In terms of the framework shown in Figure 1, learning could be characterized as the transmission of content with the grandchild having relatively little agency, and the level of social engagement also remaining relatively low.

With other texts in Bengali, conveying Western stories familiar to the children, the reading activity moved away from memorization towards an exchange of ideas as the children introduced their own understandings and meanings. This was accompanied by a level of confidence and perceived expertise of the children, which allowed for greater symmetry in the way the learning activity was controlled. This shift in approach was also recognized by the grandparents, who referred to the teaching role of their grandchildren, and a bi-directionality in learning was also evident from the transcripts. In addition, it was found that the children’s confidence in using a computer also allowed intergenerational learning activity between child and adult in some respects to become relatively symmetrical. However, it was found that grandparents played an important role in focusing attention and providing an overall structure to activities. This, rather than simply being imposed, was negotiated with the experience and worldly knowledge of the grandparents, allowing their grandchildren to accomplish what they might have been unable to achieve alone. There were moments when elements of intergenerational relationships could also be thought of in terms of guided participation wherein the learner moves towards a position of greater

agency such that learning events and understandings are co-constructed within a space that allows a higher level of social engagement. In terms of the above framework, rather than the level of agency and social interaction remaining at a fixed point in the space between the axes, there is a fluid dynamic from moment to moment as the different qualities of each participant play out.

Intergenerational learning was also found to take on a more authentic and situated quality as grandparents involved children in routine household activities such as cooking and gardening. These allowed a level of sophistication that might have been difficult to achieve in a formal classroom setting, where key principles are often abstracted from reality. With gardening, for example, knowledge about plant growth was considerably elaborated and made more sophisticated through taking into account finer detail in the balance of the key variables such as light and water. Moreover, in view of some of the grandparents' heritage and cultural experience, a further level of knowledge about plants, fruits and vegetables grown in other countries was introduced. It was noted that routine household activities such as gardening and cooking provided the 'domain', 'community', and 'practice' required as conditions identified by Wenger (1998) for a community of practice.

Many of the routine activities around the home frequently involved grandparents along with other family members that included siblings and cousins of the grandchildren who were of a similar age. It was argued that participation between the children engaging as peers, as well as with the adults, provided a basis for knowledge to be jointly constructed and meanings to emerge which were negotiable. This gave a dialogic quality to the encounters which has also been accommodated in the framework offered earlier.

Overall, the home settings and the intergenerational encounters investigated have provided a picture of learning taking a variety of forms spanning the possible approaches outlined in the summary framework. In particular, the contributions of grandparents to these learning encounters is not defined simply in terms of belonging to a generation characterized in terms of age or family lineage. Rather, it is characterized by their belonging to, and sensitively drawing from, their membership of generations characterized by other qualities to do with culture, values, knowledge, and ways of life.

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Correspondence should be addressed to John Jessel, Department of Educational Studies, Goldsmiths, University of London, London SE14 6NW, England (email: j.jessel@gold.ac.uk).

Endnotes

¹ Sylheti is an oral language from the area of Sylhet in Bangladesh. This language was spoken by most of the families in the study, with Standard Bengali being used in writing. Some families also spoke different varieties of Bengali, and the term Sylheti/Bengali has been used to cover this range of languages.

² Affectionate terms for ‘grandmother’ can vary in Bengali. The terms ‘Bubu’ and ‘Dadu’ are used to refer to paternal grandmothers by different children in this study.

³ Rommetveit proposed that shared prolepsis involves the implication of some information in speech, inviting the co-construction of understanding.

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Figure Captions

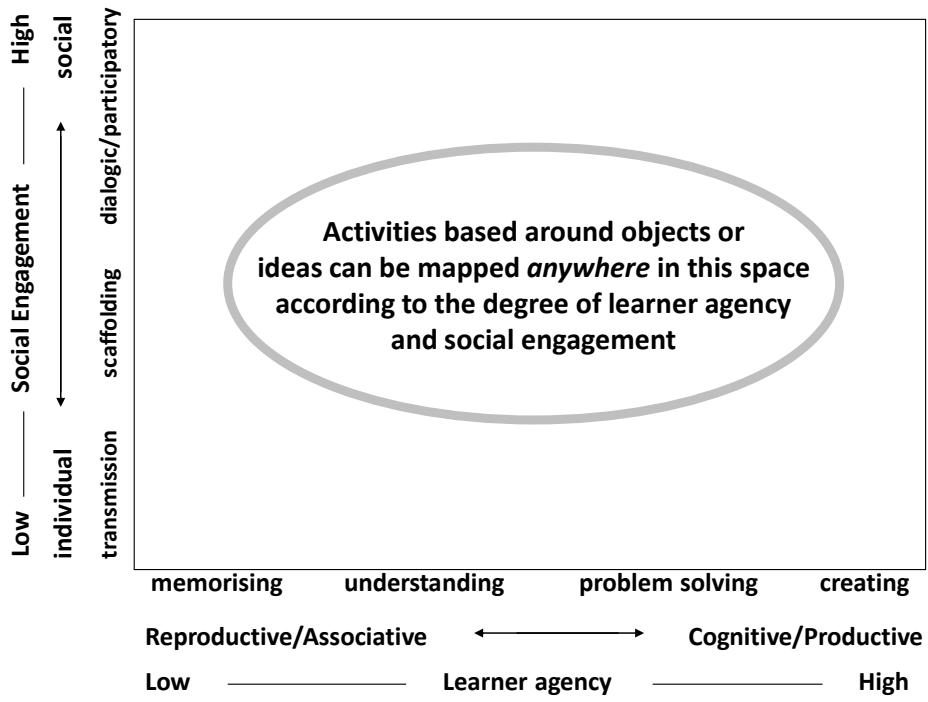
Figure 1: A summary framework for mapping activities based around objects or ideas according to learner agency and social engagement. (Adapted from Jessel, 2011, 2012.)

Table 1: A multimodal video transcript of Sahil (aged 6) and his Grandmother (Razia) playing ‘Solitaire’ on the computer.

Table 2: A multimodal video transcript of Lizzie (aged 6) and her Grandmother trying to find information about a moth on the computer.

Table 3: A multimodal video transcript of Steven (aged 6) and his grandmother (Gloria) in the kitchen.

Figure 1



<p>hmm</p>	<p><i>akhon koro</i> [do it now] <i>na akhane...akhon koro</i> [no here, now do it]</p>	<p>R/S at screen</p>	<p>S puts his hand back on R's hand and moves her hand away S gives the mouse to R and places his hand back on R's</p>
<p>hmm</p>	<p><i>aita kothai rakhbe...darou</i> [where will you put this one..wait] <i>aita...heh akhane rakhte parbe na</i> [this one...eh you can't put it here]</p>		<p>S removes R's hand and shows R using his hand on the mouse how to drag and drop the cards where they should go</p>

Table 2

Grandmother (GM)	Lizzie (L)	Gaze	Touch/action
<p>‘Moths’, ‘butterflies and moths’, now wait a minute Erm...here – try that one, yeah, try that one</p>	<p>This one, this one</p>	<p>L/GM at screen</p>	<p>L moves mouse GM hand to mouth, then points with little finger to screen</p>
<p>Yeah, press that one, ‘cos see what that says, ‘cos that first one is ‘North American moths’, it might not have this one Of course a lot of these sites are American ones aren’t they</p>	<p>Shall I press here?</p>	<p>L/GM at screen</p>	<p>L moves mouse L clicks mouse button (heading appears on screen ‘Butterflies and moths’, menu down LH side, then two pictures, small one and larger one below)</p>
<p>No there’s a moth Yes you’re quite right, yes, and that’s a butterfly, you’re right</p>	<p>What if I <?> I think that’s a moth and that – I said that’s a moth (laughs)</p>		<p>L points to lower picture then upper one GM points to lower picture L touches GM’s arm which is leaning over her</p>

Table 3

Gloria (G)	Steven (S)	Gaze	Touch/action
<i>crack an egg like .. that</i>		G + S on S's actions	S holds egg with L hand, bangs it against side of plastic jug 6 times (the egg remains intact)
<i>Eh.... (?)</i>			G lifts metal scraper with RH and hands it to S, withdraws scraper slightly, briefly makes an egg cracking gesture for S to imitate
			S takes hold of scraper with LH
		G + S on S's actions	S cracks egg with scraper with two successive hits and
<i>Ooooh!that's it</i>		G + S on the egg he has crackedhands scraper back to G G places scraper in scale pan
		G Looks towards camera G looks back at what S is doing	S continues with the egg S opens egg over jug, some shell appears to separate from the main part but does

		(S still on the egg he has cracked)	not fall into the jug, the contents of the egg are emptied into jug
<i>Woooh, not the shell, noh, ..</i> <i>..wooh....</i>		G + S on the egg he has cracked	G moves RH nearer S but hand remains poised a foot or so from him G moves scale pan slightly
<i>....any shell in there?.. ..no..</i> <i>..OK.....</i> <i>.....rest it down beside you, beside you</i>		G + S on S's actions	G lets go of scale pan and looks over into the jug which S is using G gestures with RH towards S S uses both hands to put down empty egg shell on left of jug
<i>...next one</i>		G + S on S's actions	G moves handle of scraper (in the scale pan) partly to make the scraper more accessible and (probably) partly as a reminder to S. G rotates scale pan slightly

			(clockwise so scraper handle continues slightly in S's direction).
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