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Personalization and Identity

A discussion of personalization wouldn't be complete without a detailed consideration of identity. Identity and personalization are both concerned with questions about the 'self' and the themes of authenticity, authorship, autonomy, aesthetics and attachment. In this chapter, I revisit some key aspects of psychology-based research on identity, relevant for these themes. Identity research is a large field and I selectively focus on aspects that can inform our understanding of personalization in early education and within this field, of children's personalized books and stories. For this purpose, I examine identity expressed through stories and narratives – identity in relation to the multimedia theory and to the diversity theory. The latter opens the discussion to other personalization practices related to self and multimedia, such as selfies and personalized gadgets. While the identity research aims to understand how individual feelings and thoughts relate to a culture or a social milieu (especially cultural, racial or social identity research), the personalization research has thus far focused on the learning benefits of personalized resources (see Chapter 4) or personalized education as an approach (see Chapter 10). Research on digital personalization and identity and on personalization and children's developing sense of self is virtually non-existent. Readers are therefore reminded that in the absence of confirmatory evidence, much of the following discussion is inevitably speculative.

Identity formation and Moreno's theory

What is self? How is self recognized, manifested and studied? Countless researchers have tried to establish the essence of a psychological sense of self – how it develops throughout childhood and whether it is ever achieved. The issue is more complicated than it might appear, because, as Zeman (2016) sums up: 'The self is represented countless times in the brain in a whole variety of different ways- it is everywhere and it is nowhere' (quoted in *The Psychologist*, 2016, vol. 29, 6). Such a conceptualization of self might seem vague, but it fittingly captures the complexity of the phenomenon.

I recognize the rich tradition of identity discussions within philosophy and within developmental psychology but do not have the possibility to elaborate on this complex psychological and deeply philosophical debate. In the space I have available here, I selectively focus on Moreno's theory of development (1946), because it deals with

children's creativity (an issue examined in detail in Chapter 8), because it found large practical application (Moreno's work was further developed and applied in the area of psychodrama and mental health issues, and this was later applied to counselling) and because it neatly separates children's development of identity into four stages and, as such, offers a developmental perspective on identity which is somewhat underdeveloped in the current discussions on personalization.

A summary version of Moreno's four-stage theory is as follows: in the first stage, mother and child have one shared identity; the child lives in the moment and remembers little about what happened. In his book *The Essential Moreno: Writings on Psychodrama, Group Method, and Spontaneity*, Moreno (1987) specifies that in this stage, 'mother and infant and all objects are a single whole' (p. 130), the children cannot distinguish themselves from their mothers and they perceive the mother as part of them (as it was the case physically before birth). In the second stage, the child is able to perceive himself or herself as separate from the mother and others, as well as from other objects. He or she gradually comes to differentiate between reality and fantasy. This is the time when the child begins to develop 'social roles', that is, roles which are conditioned by those around us. In the third stage, the child recognizes himself or herself as an independent individual, by pointing to the mirror and seeing how it reflects his or her gestures. Moreno suggests that this occurs when children are about 2.5 years old, that is, when they become aware of their autonomy and realize that they are a separate human being. This stage also marks the 'second universe', where the child can differentiate not only his or her body as separate from other bodies, but also other dimensions of reality such as space and time. This role is reinforced in the fourth stage, when the child 'places himself actively in the other part and acts its role' (Tavon, 1998, p. 41). The final stage does not necessarily occur during child development; indeed, some adults may not have fully completed this stage. It refers to the stage when an individual fully separates from the mother-child shared identity developed after birth and understands his or her own role in the world, including creativity. We could graphically capture Moreno's individual stages as illustrated in Figure 9.1.

Next, I provide a simplified exemplification of Moreno's theory by drawing on data reported in full in Kucirkova et al. (2014b). In this study, we examined the effects of paper-based personalized books on children's spontaneous speech. The children were aged between 17 and 56 months, which, according to Moreno, would correspond to different identity stages. For the purpose of the present discussion, I revisited the data and sorted the transcripts by the children's age. I highlighted moments of self-referential speech in the personalized and non-personalized conditions and looked

Figure 9.1 Illustration based on Moreno's theory of identity development

through the data, beginning with the child's youngest to the oldest age. Doing so, I noticed an interesting pattern: for the youngest children participating in the study: the self-referential speech was occurring in the non-personalized condition as much as, or even more, than in the personalized condition. This would be normally considered as an outlier in the study, because, as reported in Kucirkova et al. (2014b), for the majority of the children, self-referential speech occurred in the personalized condition. As described in Chapter 7, the personalized and non-personalized books were identical, but they differed in respect of the personal significance of the characters, places and images portrayed. On average, the children who participated in the study talked more about themselves when they read the personalized books. However, it seems to be the case that for the youngest children, the pattern was reverse.

This extract shows Tobias's (pseudonym, 17 months old) spontaneous speech when reading the first two pages of the personalized and non-personalized books.

Personalized condition, first page:

Oh, I don't know

Non-personalized condition, first page:

Oh, that is me!

Personalized condition, second page:

That's me

Non-personalized condition, second page:

That's me, that's me!

Similarly, when another little boy (Matias, 18 months old) saw a boy character in the non-personalized book, he thought that it was him and got confused with who is who in the two books.

Non-personalized book, fourth page:

That's not John

It's me

No, it's me!

It's me!

There were not enough young children with a similar profile to allow me to compare these age differences statistically. However, outliers can sometimes be a very informative part of a research study, albeit not always reported in academic journals. In this case, we can consider the outlier examples in relation to identity and Moreno's stages. According to Moreno's theory, these two boys are somewhere in-between the first and second stages of identity formation – they recognize that they

are individuals separate from others, but they may not have fully formed their sense of self. We can conclude that for these young children, personalization did not make much difference to their ability to talk about self (i.e. their self-referential speech). We could also hypothesize that for children aged 17 and 18 months, it is difficult to distinguish between real and fictional story characters and that this difficulty might be particularly heightened in the context of reading a personalized book.

Let me draw on another example to consider this point further. In the previous chapter, I mentioned the case studies that Dr Sakr and I have conducted over the past four years with Dr Sakr's niece Monika. We studied this child's conversation with her father and their joint engagement with a set of resources, in 2013 and then again in 2016. One striking observation that can be gleaned from comparing the data collected in 2013 and in 2016 is the child's increasing formation of identity. According to Moreno's theory, role reversal happens towards the final stages of a child's development. In 2013, we observed Monika and her father using the iPad. The child was 3 years old and her father assumed the role of the teacher, instructing his daughter how to use it. The discussion was dominated by the father, as illustrated in this short extract:

Father: 'Do you want to drag it? You pick it up and drag it to there ... keep going ... woah, you did it. ... You can take as many as you like ... but don't go so close to things because the camera can't see it because it's too dark, look that's it, you've got to ... now try and get the baby seat, the car seat, see the car seat.'

In 2016, we observed the same pair again, using an iPad together, in the same context of creating digital personalized stories. However, this time Monika was guiding her father through the user interface and he was quietly following her instructions:

Monika: 'You need to press to see anything ... then press something to see ... ok, read that. ... Now you are recording and you can say something ... just say anything.'

Father and daughter were at ease with each other and had overall a positive and supportive relationship, which may well be 'flattening' any personalization or identity effects observed in these interactions. However, the example is a convenient illustration of a basic role reversal, which, according to Moreno, occurs when the child takes on the role of the significant other. In therapy settings, role reversal is used to help individuals understand their own position; with young children role reversal helps them gain autonomy as they grow older. The tool (the iPad app) the parent and child used was the same in both instances; however, the child's ability to use it independently and harness its affordances for content production have changed over time. Between 2013 and 2016, the child has matured, developed an increased familiarity with the device and more secure identity. This developmental progress affected the ways the child expresses and experiences autonomy and authorship.

I do not list these selective examples to validate Moreno's theory. Rather, I wish to illustrate the cases where children's experiences and their developmental maturity influence the extent to which they engage in, and connect to, the 5As. They highlight that personalization could be a potentially influencing factor in developmental mechanisms. As yet, we do not have the knowledge to predict possible positive or negative influences. However, from my discussions with teachers and parents and messages reported in popular press and on social media, I know that there is a popular view that personalization negatively influences children's development of identity. In the next section, I analyse this erroneous view.

Considering the negative impact of personalization on children's identity development

The possibility of a negative connection between children's identity development and personalization is appealing to popular press; there are many articles peppered with speculations around children's identity and personalization. Journalists are often keen to cover unusual cases and build causal connections for readers' interest. I have been often asked to comment on cases where young children display seemingly selfish or 'narcissist' behaviour when they take their own photos or selfies, or when they 'boss around' their parents with technologies. It seems easy to assume that the personalized context of interaction (such as the activity of taking selfies) can cause a heightened focus on self and, subsequently, make children ego-centric.

However, the connections are not that linear. Although there are no robust data to assume benefits or negative influences, we can draw on well-established theories to make predictions. The first key point to bear in mind is that children emulate the behaviour of their loved ones. Children's agency is a reflection of the agency possibilities they note in their immediate environment. If children want to dominate and control an activity, this is likely a reflection of what they see in the behaviour of those around them when they are in power. This is not the case of children only – our sense of agency is constantly renegotiated with others who influence our sense of self. As Bruner writes: 'For while people (at least in our culture) think of Self as proceeding "from the inside out", they also tend to think of their own Selves as not radically different from the Selves of others who, in some common sense way, are "like them"' (Bruner, 1994, p. 42). Thus, we need to be aware of the general tendencies in relation to self and separate these from personalization practices.

The second theoretical point of critical importance here is that for overall estimates of benefits, we need to be looking at the whole person, not a set of discrete behaviours, and we need to consider how these might change in a supporting context. As Vygotsky and many other key early childhood scholars remind us, there is a flow of influences between the child, adult and the resources they use. It is unlikely that the personalization features of a specific resource are causal – the child's characteristics and the parent's support can counteract or enrich children's understanding of self. In the Kucirkova et al. (2014b) study, the reading protocol prevented the researcher

from providing individualized support for each child. In real life, this is not the case and parents typically adjust their reading styles according to the child's needs. For example, Hassinger-Das, Mahajan and Metz (2016) found that parents who use supportive reading styles (the dialogical reading style) can overcome the negative effects of distracting digital books. Parents supported children's story understanding even when they read digital books with many interactive features, which are often detrimental to children's learning. Given that for learning outcomes there is a big difference between children's independent and shared use of books, we could expect the same difference for children's identity development too. It might even be that with skilful and sensitive support, personalized books could be used as an effective context for supporting the development of children's identity. At this stage of research, it is important to remember that the effects could be negative or positive and that in all contexts there is a complex interplay of child's characteristics and parent-child interaction factors.

Expanding the notion of context even further, the third theoretical point relates to the definition of personalization and development as a broader nexus of influences. If we conceptualize personalization broadly and subsume under it all self-oriented practices young children can do with new technologies (e.g. taking selfies, creating their own avatars, writing their own books and programming their own games), then there are many areas where this influence could be suspected. Rather than evaluating personalized resources and child's identity in a narrow bidirectional link, it might be more fruitful to think of their relationship in the wider context of a variety of activities and possible influencing factors, including the popular culture, media, socio-cultural values, their family, neighbourhood and peers (Bronfenbrenner & Morris, 2006). For instance, in the case of audio-recording and picture-taking, the socio-economic and socio-cultural backgrounds of a family influence how a child might wish to construct and portray their identity in the digital medium. In some families, for example some Roma families, selfies and personal pictures are considered a 'safeguarding' practice of an 'endangered culture' (Sabiescu, 2009, p. 1). Such a theoretical stance allows us to see that a seemingly bidirectional relationship between personalization and identity could be disrupted or enhanced with a network of other influences that are part of the environment where the child grows up.

In sum, we don't have the data showing one way or the other – personalized practices and digital personalization could potentially negatively or positively influence children's developing identities. I have studied personalization in children's books and reported heightened focus on self (as demonstrated through self-referential speech) with these resources. This doesn't mean that the focus is permanent or that reading of personalized books suddenly makes children egocentric. It is only with rigorously designed longitudinal studies that we can estimate the impact of earlier onset or prolonged use of personalized resources/activities. It is therefore certain that the relationship between children's identity formation and personalization will be a very fruitful future area of personalization research.

The next section is devoted to another key future direction for personalization and identity research: the examination of the relationship between personalization and narrative.

Personalization and narrative

Researchers working in a variety of fields have recognized the close link between identity and narrative. Narrative is a powerful organization tool, and, through narrative, children can organize their thoughts and feelings and thus reflect on who they are. Narrative and identity are ‘not separable entities but, instead, serve to mutually constitute one another’ (Gover, 1996, online). This is why Cavarero (2014) wrote that children’s identity can be specified and accessed through children’s own narration and story-making and why Arendt (2013) argued that ‘who somebody is or was we can know only by knowing *the story* of which he is himself the hero – his biography, in other words’ (p. 186, emphasis mine).

In the examples discussed so far, personalization occurred as part of fictional narratives, embedded in children’s personalized books. When discussing personalization in relation to personalized books, we are thus dealing with a very specific case of personalization: one where narrative dominates, and where a potential link to identity can be expressed. In the personalized books studied in my research (summarized in Chapter 6), the text was either autobiographical or based on a fictional story with personalized elements. The text followed a chronological sequence of events, with different story characters and a typical story-arc structure of a beginning, middle (climax) and an end. It is therefore important to ponder the potential influence of narrative on the effects noted in these studies and contemplate whether the same personalization effects would be observed in a non-narrative context. First of all, let us consider the role of fiction as it is often confused with narratives.

The influence of personalization on narrative and fiction

Narrative is sometimes thought to be the same as fiction. However, as Professor Marie-Laure Ryan, prominent international authority on fiction and narrative studies, explains: ‘While fiction is a mode of travel into textual space, narrative is a travel within the confines of this space’ (Ryan, 1991, p. 5). In other words: ‘Fiction is a knowing and self-conscious narrative of events and experiences which cannot be known to have happened’ (Ashe, 2015, p. 7). Fiction can be specified as the characters of a game or of a film can be the same, but the narrative within each genre (game and film) could be different. For instance, the narrative of the Little Red Riding Hood is different in a Walt Disney film and in the original European fairy tale. The fiction, however, is the same in all versions: there is a big, bad wolf and a small, innocent girl wearing a coat with a red cap.

The fiction versus narrative difference implies that personalization could be used to influence narrative as well as fiction, but in a different way. An example of personalized fiction are the personalized products developed by Lost My Name, outlined in more detail in Chapter 4. All books published by Lost My Name follow a different narrative based on the child’s first name, but the fiction is the same as the characters and the main theme of the book (a child lost his/her name) is consistent across all books. An example of personalized non-fiction was provided in Chapter 7, where a teacher added children’s personal data to a mathematics session and

personalized the 'Growing a Beanstalk' activity. Personalized narrative, on the other hand, would be an autobiography, that is a personal story of an individual's life. An example of personalized narratives was provided in the first section of Chapter 4, with the focus on home-made, not mass-produced, personalized books. Narrative and fiction could be therefore used as another element of classification/rubric for personalized books and stories.

In addition, narrative and fiction could be used to clarify some nomenclature confusion mentioned in the previous chapters in relation to personalization, customization and individualization. As explained previously, 'customized' tends to be preferred in the business industry, while 'individualized' in the education sphere. 'Autobiographical' and 'biographical' are terms preferred in the literature field. In the literature domain, personalization and personalized is often replaced with the word 'autobiography' or 'autobiographical' (individualized or customized narrative is rare), or 'biographical' when a piece of text relates to an individual's life but has not been written or produced by this individual. This adds a fourth term to the triad of adjectives mentioned so far (customized, personalized and individualized). In the context of books and literature, the four terms could be placed on a hierarchical line of personal relevance, with autobiographical narratives scoring the highest in terms of personal relevance and fictional narratives the lowest. In other contexts, however, such a principle would not work, as the nomenclature tends to be very field specific.

Given the close relationship between narrative and identity and between narrative and fiction, we could hypothesize that personalized narrative and personalized fiction will impact on children's identity more than non-personalized non-fiction. It seems common-sense that reading a moving biography would impact a child's identity more than reading a book on, for example, car engines. But is it really the case? What is it that is at the core of personal relevance? The concept of a narrative arc and a reflection on fictional as opposed to factual can further bring us to the core of personalization. If we say that a piece of text is personalized, is it because we wrote it (i.e. it is autobiographical) or because we recognize it as something we experienced in the past (i.e. it is a narrative) or because it resonates with something we know (i.e. it is factual rather than fictional)? In light of limited data, such theoretical musings can help our understanding and inform future formal studies. Some support for the discussion can be found in Bruner's work.

Bruner (1990) wrote that we make ourselves through stories that we tell ourselves and stories that we tell others about ourselves. For fiction, the expectation of a possible, imagined world allows us to practice, project and perform different facets of identity. A narrative with its linear structure, on the other hand, provides some order into what would otherwise be fragments of mixed experiences. Stories thus play a dual role of projecting and performing the self. Stories in different forms and formats, with different authorship and thus different degree of the 5As, will influence the self differently. Bruner (1990, p. 43) also writes: 'Self is a conceptual structure, a system for categorising selected memories, for engendering expectations, for judging fitness.' I touched on memory processes and personalization in Chapter 3, by evoking the close relationship between memory and recognition of new words based on a personal pictorial clue or the use of the first person. If we think of identity as an organizing

device for memories, and of memories as a factual narrative, then a theory-driven explanation of personalization is that personalization is the binding mechanism, or the 'glue', between past, present and anticipated self. Such an explanation allows for multiple forms of representation of personalization, including personalized digital stories or books. These personalized resources can be said to contain elements of past self (e.g. photographs of a child from the summer holidays), of the present self (e.g. the child's audio-recordings taken as part of digital story-making) and of the anticipated self, which could be the desired self, portrayed to others in terms of stylized selfies, or the more objectively anticipated self, based on the performance on previous tests and tasks (e.g. the child's individualized reading profile based on the sums of the child's previous reading performance).

Next, I discuss how narrative ties together different versions of self or different fictional and real parts of one's identity. This leads on nicely to two key notions that are related to the trio of fictional narrative, personalization and identity: the notion of a collective identity and the notion of a distributed self.

Collective identity

In their book *Creativity and Writing: Developing Voice and Verve in the Classroom*, Grainger et al. (2005) draw on late Harold Rosen's work to remind us of the connection between stories and collective identities: 'Stories are part of an essential process, the creation and recreation of a collective identity' (Rosen, 1984, p. 16, cited in Grainger et al., 2005, p. 120). Vygotsky does not discuss identity explicitly but researchers building on his legacy maintain that identity is a collective rather than individual phenomenon. Littleton and Mercer (2013), for example, argue that individual cognition is combined with the collective cognition in the process of interthinking. The notion of interthinking, or collective thinking, leads us to the consideration of a deeper, philosophical issue of whether there ever can be such a thing as one self, one author and an individual thinking. Dyson (1997) wrote that we can 'never own meaning, because meaning only exists in the meeting of voices' (p. 180), and contemporary socio-constructivist perspective agrees that self is constituted socially. By a simple extension it follows that a child's authorship and autonomy can never be owned by a child but rather exists in the 'meeting' of multiple selves.

The reason I'm mentioning these concepts here is to make the connection to my argument in Chapters 4–6, in which I wrote that personalization is not a unified concept but rather a multiset of options, a spectrum of possibilities characterizing the self. A socio-constructivist view on identity corresponds to this definition and highlights what Bronfenbrenner and Morris (1998, p. 996) described as reciprocity and complexity in the human interaction with the immediate environment. According to the PPCT model of Bronfenbrenner and Morris (1998), there is a constant, iterative process of interaction between people, processes, context and time. The concept of a collective identity certainly fits the PPCT model better than that of an individual identity. While an individual identity fitted well with Moreno's focus on developmental progress, collective identity can help us conceptualize personalization

processes relevant for broader socio-cultural trends, such as the issue of citizenship and national identity. Collective identity also situates personalization in relation to a variety of broad labels such as 'me generation', presumably capturing the rise in personalization practices in the last twenty-five years. I alluded to the difficulties with these labels and perspectives in Chapter 2. From a socio-constructivist perspective, the process of personalization is essentially a collective process of negotiating various versions of self with others. If we describe a generation of children as self-centred, then we need to acknowledge that this characterization reflects on these children's parents and grandparents. This is not incompatible, but works alongside the notion that self is not unified, neither individually nor collectively – self is always distributed.

I therefore continue this theoretical discussion by concentrating on the notion of a distributed self that is relational and refers to contextual differences and interactions with other agents in various contexts.

The distributed self

A distributed or multiple self needs to be constantly negotiated and re-created through relationships with others, or to borrow from Hull and Katz (2006), constantly 'enacted' in relation to others. One could speculate that stories authored by children contribute to such a negotiation of identities. Hull and Katz (2006) conducted a longitudinal study in which they studied the composing of a digital story by a child and by a young adult in a community setting. Based on their findings, the authors concluded that the digital medium offered the child and the adult unique opportunities to experience their authorship, autonomy and agency. They argue that we 'enact the selves we want to become in relation to others – sometimes in concert with them, sometimes in opposition to them, but always in relation to them' (p. 47).

This quote foregrounds an interesting conundrum: Can personalization be articulated through its opposite effect, through its ability to highlight non-personalization? If we assume that the role of fiction is to provide clues about our lived reality and the role of narrative is to create order in spontaneous, unstructured life experiences, then we could assume that the role of personalization is to highlight the non-personalized aspect of a fictional narrative, to help us recognize our relationship to others (rather than oneself). From this perspective, personalization is not about subjective identity but about social relationships with others. Through personalization, social relations become meaningful; they become signifiers about our own self.

And herein lies the difficulty of personalization translated into concrete, static objects. Personalized books capture and stabilize the process of negotiating self with others; they 'freeze' a particular version of self in multiple formats (audio voiceovers, pictures, text). How might personalized books, personalized education and personalizing learning resources affect the 'gathering' of multiple selves and one's experience of identity? Sceptics might ask whether personalized narratives disrupt multiple selves by reducing them to one particular version of self (the version presented

in a personalized resource). It could also be the case that personalized narratives offer a platform to present and perform a new, alternative, version of self. This possibility has been pondered by some authors and I briefly revisit them next.

Can personalization disrupt identity?

Narrative theories are not medium-free theories: they recognize that the process of individual versus collective interchange occurs differently in oral, virtual or textual narratives. These different modes of representation influence the quality of the narrative, and consequently, the identities constructed through the narrative. Technologies with their multimedia options for narrative provide new opportunities to 'reshape stories' (Madej, 2003, p. 15). In her theoretical article, Sakr (2012) argues that new technologies can disrupt this process and influence a child's sense of self. She outlines: 'The textual artefact acts as a central means of finding coherence between the events, moments and behaviours that contribute to our subjectivity, ultimately enabling the individual to perceive their own subjectivity.' 'Imposing alternative practices or incorporating new technologies into the text-making process should therefore contribute to a new sense of self' (p. 120). Not surprisingly then, researchers are interested in better understanding how new technologies (in the form of popular culture online, social media networks and other virtual spaces accessible through technologies) affect identity.

Marsh (2004) investigated how 2- to 4-year-old children navigated popular and media culture together with their parents. In Marsh and Thompson (2001), eighteen parents of 3- to 4-year-old children kept a diary in which they noted their children's literacy practices across a range of media for four weeks. In Marsh (2004), forty-four parents of 2- to 3-year-old children completed the questionnaires, and half of them were also interviewed by the researchers at home. Collectively, these studies provide invaluable insights into the rich and multifaceted media practices of young children growing up in white working-class families living in publicly owned housing. They also provide insights into children's identity formation in relation to multiple contexts and agents. I pick out one example of young children's exploration of identity in relation to the digital media, which is relevant for the present theoretical discussion of personalization.

This example is discussed in detail in Marsh (2005) and is about a 4-year-old girl Jade, who loved the Winnie the Pooh story and had a number of transmedia products related to this story at home. Professor Marsh portrayed these as a 'narrative web' (p. 37) and detailed that this narrative web included Winnie the Pooh displayed, represented or embedded in Jade's umbrella, cuddly toy, computer game, books, nightdress, writing set, stickers and cards, lunchbox, comics, jigsaw, hot water bottle, cover, Duplo and video. These objects, Marsh (2005, p. 37) writes, 'are central to the development of a sense of identity, or ontological security (Giddens, 1991). Parents, carers and wider family members in these projects all contributed to this synergy between popular texts and identities, buying children more and more items related to a particular favourite figure'. Today, all the objects listed by Marsh (2005) are part

of the burgeoning personalization industry where family members can not only buy a product with the child's favourite character but also the child's name, date of birth or other personal characteristics. For example, parents can buy a personalized Winnie the Pooh book from Getting Personal Ltd, which the producers describe as follows: 'Every child will love to star in their own adventure story with Pooh and friends in our Personalised Adventure Book – Winnie the Pooh. You can personalise the story with the child's name, birthday and even where they live! The inside cover also includes a short dedication with the sender's names, to appear after "With love from..."' (<https://www.gettingpersonal.co.uk/>). In addition to books, there are personalized Winnie the Pooh door plaques, signs, stationery, pyjamas, cards, albums, frames, mugs, bedding and thousands of other products. The gifts are affordable and attractive to young children; in fact, it may well be that if the study was conducted a few years later, Jade would have a 'personalized narrative web' of Winnie the Pooh artefacts at home.

The personalized artefacts bring together popular texts with the child's emerging identity and identification with fictional narratives. From a commercial perspective, we could perceive them as an example of a sustainable transmedia model of personalized artefacts (see Chapter 4). From an educational perspective, we could perceive them as part of a narrative that supports the child's entry into the story world of Winnie the Pooh and provides her with opportunities to practice early literacy skills. However, given the lack of autonomy and authorship in these products, we could also perceive them as potentially narrowing, commercially driven and isolating ways of supporting children's identity. In a world of millions of stories, should parents be diversifying or further personalizing children's interest in the popular culture? Furthermore, in relation to the distributed and multiple self, a suite of objects embossed and printed with 'Lucy's Winnie the Pooh' all over send a powerful message to the child about her identity. The fiction is the same (Winnie the Pooh) but the narrative can be different with each of the personalized objects. The multiple formats of the same story reinforce the same story, which, on one hand, can deepen the child's knowledge of the story and, on the other hand, can take away the possibility of diversity (and exploration of alternative selves). Do they therefore disrupt or support the child's identity? There are no single answers to these questions: a developmental psychologist and a socio-constructivist would issue different guidelines for parents. I do not want to sit on the fence but am wary of the limited research concerned with these new phenomena. I therefore highlight a few theories that are worth bearing in mind when answering these questions, regardless of the epistemological tradition adopted by the researchers or educators.

The multimedia theory, personalization and identity

The multimedia theory is a psychology theory that can provide some clues about the learning potential of personalized transmedia objects for young children. The multimedia effect has been fully researched and theorized by Professor Richard E. Mayer and his colleagues at the psychology department at the University of California, Santa Barbara. I have already mentioned the work of Professor Mayer in relation to the personalization effect in Chapter 3. Mayer studied the

personalization effect as part of the multimedia effects that I discuss here. The basic premise of the multimedia effect is that people learn better (more deeply) if the information is presented to them in several (multi) media (such as pictures and texts), than when the information is presented to them only in texts. Mayer et al.'s experiments have shown that the multimedia effect applies to both printed text with illustrations and spoken text and animation on screen (Mayer, 2003). As an explanation for the effect, Mayer (2003, p. 130) posits that learners access more channels with text and pictures and therefore information presented in multimedia is 'more likely than words-only messages to prime all the cognitive processes for active learning'.

In digital stories, that is stories created and shared through technologies, the 'self' is shared and represented through text but also images, sounds and videos (i.e. multiple media). The narrative might still follow a linear structure, but the modes of representing self are multiple, with a more visual or perhaps more concrete way of reassembling self than it would be possible through an oral or textual narrative. With digital story-making apps such as the Our Story app mentioned in the previous chapters, children have the opportunity to explore, project and perform their selves in a variety of media. For example, they can insert a selfie using the front-facing camera which represents their physical appearance, they can portray their mood by adding an audio-recording and they can enrich this assemblage with a textual caption. They can create their own avatars and explore alternative or virtual worlds. Based on the multimedia theory, we could therefore hypothesize that personalized multimedia stories will be more conducive to children's learning than unimodal technologies. However, the multimedia effect does not specify how many media are needed for which learning situation. It would be too easy to assume that more is always better and that the more media and expression forms of identity we add to children's learning, the better is their learning. According to another psychology theory, there is a limit to how much new information we can take in at a time. The field dedicated to so-called cognitive load theory (see the work by emeritus professor John Sweller, the University of New South Wales, Australia) studies the relationship between the design of learning resources and the limited capacity of working memory. It is well established that prior experience can reduce the experience of cognitive load (Kalyuga, Ayres, Chandler, & Sweller, 2003), but as far as I know, apart from the Sheehy's 'handle' technique (see Chapter 7), no one has formally tested the possibility of reducing cognitive load through visual personalized cues and the effects this might have on an individual's memory/learning performance. It could be that personalized objects and personalized multimedia resources reduce the cognitive load and enhance the multimedia effect. However, it could also be that too many personal clues become overwhelming, defining and limiting, and that they add to the cognitive load that an individual experiences during the learning process.

Presenting Jade with several versions of Winnie the Pooh could potentially increase her understanding of the fiction, but because of the different narrative (and different depictions of the bear in different artefacts), it could also confuse and overwhelm her. If we personalize these different versions of the same story, we could potentially standardize or provide more coherence into these relationships.

Designers and developers are not typically interested in why children respond to personalized artefacts. They are more interested in how to increase their response. During my consultancy projects with children's publishers, I have been often asked about a 'magical number of personalization' – how many elements of a story need to be personalized for a child to identify with it? Designers are also keen to know whether one mode of personalization (e.g. a pictorial personalization) is more powerful than textual personalization, for example. They also want to know whether a specific kind of personalization (e.g. the use of a child's name) is more powerful than another kind (e.g. the use of a child's home address). If we translate these questions into theoretical considerations, we can run into some deeply philosophical questions, such as: At which point is our identity unique to an individual and at which point does it merge into a collective identity? How many elements do we need to define someone's originality, unique personality and authentic character? And is there a notion of self that escapes and exceeds verbal language, which can be activated through pictorial or physical modes of self-representation? These questions might sound abstract and theoretical, but on a practical level they are daily considered by children's publishers and designers.

I have already explained that there is no magical number that would define what counts as personalized and what as non-personalized. In explanation of the 'magical formula' for personalization, I offer a partial answer. A concept worth remembering in this context is what Ryan (2006) calls the paradox of choice. This applies to the often-mistaken view of business (or economics) that more choice is better. Sometimes too much choice leads to paralysis and the user doesn't know what to choose. Similarly, when defining the self, too many attributes may give rise to a confused perception of subjectivity. Alternatively, we could explain the paradox of choice with the notion of collective identity. The more attributes we use to define who we are, the more it is likely that some of these attributes belong to others too and that our individual identity becomes a collective identity. When thinking about the different attributes to define 'self', the theory of diversity can be a very useful framework.

The theory of diversity

Nehring and Puppe's (2002) theory of diversity uses the multiattribute approach to explain the concept of diversity, and as the authors write, it can act as a 'canonical conceptual framework for thinking about diversity'. Written in economics language, the actual algebraic formulation and theoretical argument of the authors is complex and detailed (see the original paper). What is relevant to our discussion here is the concept that diversity is quantifiable, but it is based on multiple attributes. Here is a simplified version of Nehring and Puppe's (2002) requirements for diversity:

1. Individual objects will be valued more highly if they realize higher-value attributes (angel is more than a stone)
2. Similarity and, hence, non-additivity are accounted for naturally (two angels are less than adding to the angel a stone)

3. The marginal diversity of an object is the total value of all its attributes not already realized by the existing set

From these premises I deduce that diversity is essentially an aggregation of dissimilarities, and that these dissimilarities are not in any hierarchical relationship to each other. I further deduce that personalization is an aggregation of similarities, again not in a hierarchical relationship to each other. For example, when personalizing a book for a child, we could use the child's name and the names of her two friends. To increase the value of personalization, we would need to use a third attribute that is not adding to the existing set but that increases its diversity. So, in this example, we would not use the third name of the child's friend but rather ask about, for example, the child's favourite toy. This is more valuable than asking for a third name of a friend if two names of friends are already provided (see point 2 above: similarity and non-additivity are accounted for naturally).

The diversity theory has not been applied to personalization before. For future applications, Professor Nehring (2016, personal communication) rightly pointed out:

In regards to the intended implementation, I am not sure, though, where the personalization and the diversity components are supposed to enter: in the main character itself, or in his/her lifeworld/challenges/experiences. How deep does the personalization need to be to open the child to different perspectives? Perhaps one might use formal similarity and dissimilarity measures along different dimensions to find out which works best.

Thus, while we may be able to quantify personalization, we need to be careful about the individual elements we are personalizing. There is no magical formula, but the diversity theory was helpful in my own thinking and efforts towards genuine and rich (i.e. authentic) representations of self in children's products. Far too many so-called 'personalized' books and toys for children are based on scripted, template-based notions of self and on attributes that are anything but diverse.

The orientation towards multiplicity and diversity signals a departure from stage theories of developmental psychology and from economics theories interested in simple aggregates. It brings us to a more nuanced understanding of personalization, where each attribute of personalization relates to a specific aspect of a distributed and collective self. The personalization process might activate at times a more subjective and at times a more collective experience of 'self'. They might also encourage more exploration and experimentation of alternative identities. In the absence of evidence, I do not make any claims on these points, but trying to piece this puzzle together will be an interesting and challenging future work.

Before I conclude, I offer one more theoretical digression and briefly evoke theory of mind to interrogate the relationship between personalization and socio-emotional effects. The theory of mind needs to be mentioned in this chapter to redress the balance of a highly cognitive focus so far. Unlike other theories addressed in this chapter, 'theory of mind' is not a theory but a term used to describe a mental ability and it refers closely to socio-emotional skills.

Theory of mind

Theory of mind, emotion knowledge, emotional literacy and emotion talk are all essential social skills and aspects of human communication. Literature scholars know this well and countless analyses of classic texts show how the texts' structure, storylines and characters support children's socio-emotional skills. Good books are educational not just because of the words/ vocabulary they contain, but also because of how they relate to the characters' feelings. The moral story embedded in literary fiction supports children in being able to empathize with the characters, to question and reflect on their own emotions.

We know from studies with adults that different genres impact differently on adults' theory of mind. This was shown in an ingenious study by David Comer Kidd and Emanuele Castano, reported in *Science* in 2013. The researchers compared how adults' theory of mind (i.e. adults' ability to recognize affective and cognitive states in other adults) is influenced by reading literary fiction, nonfiction, popular fiction or nothing at all. The results confirmed the authors' initial hypothesis that literary fiction is superior in supporting theory of mind (even if temporarily). The authors argue:

Our contention is that literary fiction, which we consider to be both writerly and polyphonic, uniquely engages the psychological processes needed to gain access to characters' subjective experiences. Just as in real life, the worlds of literary fiction are replete with complicated individuals whose inner lives are rarely easily discerned but warrant exploration. The worlds of fiction, though, pose fewer risks than the real world, and they present opportunities to consider the experiences of others without facing the potentially threatening consequences of that engagement. More critically, whereas many of our mundane social experiences may be scripted by convention and informed by stereotypes, those presented in literary fiction often disrupt our expectations. Readers of literary fiction must draw on more flexible interpretive resources to infer the feelings and thoughts of characters. That is, they must engage ToM [theory of mind] processes.

(Kidd & Castano, 2013, p. 378)

Although these findings have been replicated, there have also been studies that have not found the same effects that Kidd and Castano reported in their original study. The latest evidence says that the effect of literary fiction applies only to a certain group of people, only in certain contexts (*The Psychologist*, December 2016).

Nevertheless, the nub of the story remains that literary fiction with its unpredictable, inconsistent characters, influences theory of mind, that is, the ability to understand that others have a 'mind' and engage in mental processes. In traditional literary fiction, the characters are not known to the reader, and the reader has to 'personalize them', to identify with them, to be able to empathize or sympathize or at least feel some solidarity with them. Personalized books go against this identification principle: they present children with characters the reader has chosen (in the case of self-authored stories), or characters that are the reader himself/herself (in the case of 'personalized'

or ‘customized’ stories). For customized children’s stories, the hero carries the name of the child, but experiences things that the fictional character would normally experience (e.g. in the customized Cinderella book the main character carries the name of the child but the story follows the plot of a poor girl suffering abuse by her stepmother and then marrying a prince). Although such books are very popular among young children, there is no solid data to inform us how these alterations to classic stories might influence children’s understanding of the characters’ emotions and of their own emotions. Unfortunately, even literacy-related and socio-cultural theories do not provide many clues on these conundrums. Vygotsky acknowledged the importance of emotions for learning (see Chapter 9) but he did not focus on intimate or complicated emotions. Bazerman (2001, p. 175) described this as Vygotsky’s ‘optimistic view of human interaction’. For future studies concerned with children’s emotion knowledge and personalization, different theoretical frameworks, such as Martin Hoffman’s theory of empathy and empathic distress, might be more useful. It should be remembered that emotional connections to literary characters are built not only mentally but also through physical touch. In this respect, Zhao and Unsworth’s (2016) observations might be of interest. The researchers observed children’s interactions with an interactive iPad storybook and suggested that through the haptic, direct interaction with the text and illustrations, young children become more involved with the story and emotionally closer to the story characters than with a traditional paper-based book. This is an interesting proposition, which will need to be put to test with more studies.

Summary

In this chapter, I offered a selective, and therefore limited, view on identity and its relationship (empirical or hypothetical) to the study of personalization. When defining the self and considering children’s identity, there are stage theories, which assume a unified self and socio-culturally oriented theories, which highlight the collective and dispersed nature of identity. The diversity theory reminds us that the application of personalization to specific resources should not focus just on quantitative measures of attributes, but carefully distinguish which elements are to be personalized and in which sequence. Given the unprecedented multimedia options to personalize fiction and narratives, emotional aspects of identity development remain a mystery.

The insights from this chapter beg the question of balance between individual and collective self represented in personalized narratives and between quantifiable and dispersed aspects of self captured in personalized fiction. They point to a flexible dynamic ‘meeting space’ between personal and others’ attributes and between the stable and iterative, context-dependent aspects of self. Effective personalized education nurtures these ‘meeting spaces’, and is not placed at their extremes. This is a premise I have followed in my empirical work and further elaborate in the closing chapters for this book.