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### You in Motion

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## **You in motion: Stories and metaphors of becoming in narrative learning environments**

### **Introduction**

In a lecture on English literature at a Dutch university of applied sciences, a lecturer reads “The ones who walk away from Omelas”, to his class, a story by Ursula K. Le Guin about a seemingly utopian society. At the end of the narrative, it is revealed that the society’s wealth and welfare depend on one child’s continued suffering. As he reads, he notices the students’ regular restlessness has disappeared. The room has become completely silent.

Eventually, a student asks: “Does this story hit *every* group like a truck?” Students start discussing it. During the break, everybody lingers and the lecturer checks in with some students, ensuring they can manage the emotional impact. After the break, they discuss the story further. The lecturer focuses on its social relevance and a lively discussion about contemporary society and being consumers ensues.

Storytelling has been a key part of the first year of these students’ teacher training programme, not only in the form of sharing literary stories. For instance, students receiving career coaching were invited to write about their own study experiences and discuss these stories with each other and their coach.

The lecturer and his students are part of a pilot study to analyse the dynamics of storytelling and the meaning-making stories entail in educational settings. This chapter will present this pilot study as an exercise in building *narrative learning environments*.

### **Narrative learning environments**

Our starting point in conceptualising narrative learning environments is Gubrium and Holstein’s (2009) notion of “narrative environments”: the contexts within which “story construction” and storytelling take place (p. xvii). These are constituted by and facilitate “narrative work”: “the interactional activity through which narratives are constructed,

communicated, and sustained or reconfigured” (p. xvii). Thus, narrative work includes the discussion and interpretation of stories.

Barthes’ (1990) discussion of “readerly” and “writerly” texts ties in with this idea of narrative work. A readerly text renders the reader a consumer of a text: a passive receiver of denoted information “plunged into idleness — he is intransitive [...], instead of gaining access to the magic of the signifier, to the pleasure of writing, he is left with no more than the poor freedom either to accept or reject the text” (Barthes, 1990, p. 4). However, Barthes asserts that “the goal of literary work (of literature as work) is to make the reader no longer a consumer, but a producer of the text” (p. 4). The writerly requires interpretation; it has a plurality of possibilities: “a galaxy of signifiers [...] forming “nebulae” of signifieds” (pp. 4-8) as the reader generates their own production of the text.

Stories and their narrative environments complement each other. Stories constitute a narrative environment, which in turn facilitates and regulates the storytelling that occurs within it. By telling stories, people “construct environments that explain, justify, or otherwise offer understandings of their own and others’ conduct” (Gubrium & Holstein, 2009, p. 129). Thus, there is an ethical dimension to storytelling that goes beyond the mere cognitive use of stories in education that is usually meant by a “narrative learning environment” (cf. Dettori & Giannetti, 2006). A narrative environment is thoroughly writerly: its stories offer those who belong to it “resources” from which they can “assemble” their own stories, crafted in terms of their “particular circumstances” (p. 182).

As Gubrium and Holstein (2009) see it, whenever people communicate, there are stories – and wherever there are stories, there are narrative environments. Thus, they define the terms “narrative” and “story” very broadly, to include almost all human interaction. We want to be more specific.

First, we see a narrative as simply *an event with change over time* (Baboulene, 2018). We constantly form autobiographical narratives, some of which become well-worn narratives stored in our memories. However, narratives do not become stories until they are reactivated alongside our mental maps of our current perceptions of the world and bodily states and are reinterpreted through our higher cognitive functions to enable a new version or story of ourselves (pp. 21-22). This new version is a live, updated map that tracks different elements

and allows us to see ourselves anew and adjust our conduct accordingly to replace outdated narrative scripts that may no longer serve us. We call this continuous process of becoming the *you in motion*.

Second, even though Gubrium and Holstein (2009) posit that all human environments can be perceived as narrative environments, we are interested in how we can design learning environments that actively seek to engage participants in “narrative work”.

### **Building narrative learning environments**

We will highlight three constituents of narrative learning environments: a certain degree of autonomy; the use of storytelling and metaphor to map the becoming of learners (and teachers), as a way of expressing what it means to be a you in motion; and the use of storytelling and metaphor to offer *stories in motion* that help learners to reflect, consider alternatives and critically assess their content. We will then highlight the teacher’s role in a narrative learning environment.

First, a narrative learning environment needs to be autonomous. Simons and Masschelein (2012) remind us that the word “school” derives from the Greek word “σχολή”, meaning a “space of ‘free time’”, that is, “freed from daily, economic and political occupations” (p. 72). In school we should be free from “economic, cultural, political or private” duties and bounds that regulate society at large, so that our actions at school are primarily experiments and explorations, the “not for real” (p. 73). This is important in narrative learning environments, where learners and teachers need a safe space to share stories through which they can experiment with being a you in motion. In narrative learning environments, the main aim is not *learning something* but *becoming someone*.

Autonomy does not mean that “school is disconnected from society” (p. 73). Rather, it guarantees that society and aspects thereof – such as students’ future professions – may be critically analysed and rethought through storytelling. As Korthals Altes (2014) argues, storytelling is an ideal tool for the “transmission and negotiation of ways of doing things, preferences, values and worldviews” (p. 22). Stories are events *about* other events and this “aboutness expresses difference, and the capacity for distancing” (p. 26). Thus, writerly

narrative work enables “the negotiation of values”: not merely transmitting the way things are, but also inviting us to evaluate and reimagine them.

In turn, the shape this narrative work takes – the images, words or sounds – may create a heightened awareness of what is at stake in the narrative (Nussbaum 1992). The creative use of metaphors is a major way of achieving this (pp. 154-158). It seems, therefore, advisable to engage not only in narrative work, but also in what we call “metaphoric work” – telling and interpreting metaphors – in a narrative learning environment. Bougher (2014) even suggests that narrative and metaphor may be most beneficial when used together. She argues that “metaphor and narrative can act as structuring guides for one another”, with metaphor providing “a structure that guides narrative, infusing texts with symbolic meaning” (p. 255).

Thus, metaphor may be especially useful for negotiating the “aboutness” that we seek to introduce in narrative learning environments. Egan (1997) argues that the creativity involved in comparing something to a similar other gives metaphor a “generative power” that leads to an “expansion of understanding” (p. 58). Metaphor can therefore be helpful in conveying information, making information “stick” in learners’ minds: “metaphor and narrative are both instructional tools available to educators” (Bougher, 2014, p. 256).

Metaphor may also have uses beyond being an instrument for cognitive transference. It is “one of our cognitive grappling tools” and, as such, it “enables us to see the world in multiple perspectives and to engage with the world flexibly” (Egan, 1997, p. 58). Thus, metaphors may help us map and facilitate processes of becoming, as they “structure our perception, thought and action” (Saban, 2006, p. 299).

For instance, Goldstein (2005) discusses a narrative learning environment in which metaphor became “a means for assisting beginners to articulate who they think they are as teachers” (p. 9). Used as a “reflection tool”, metaphors “can [...] help educators understand the circumstances they are currently involved in” and “make sense of their professional lives and practices as they [have] experienced [them]” (Saban, 2006, p. 306). Thus, metaphors may not only be used to describe experiences, but also to work through them. Metaphoric work, too, needs to be thoroughly writerly: teachers and learners “can be helped to better understand their professional roles and identities via creating their own metaphoric images as well as analyzing those of others” (p. 312).

What role do teachers play in narrative learning environments? First, they *convey* relevant narratives and metaphors. Art, pop culture, personal or other people's stories can all provide these. Teachers model storytelling behaviour and invite learners to do the same, thereby instigating the narrative and metaphoric work expected of the learning community. However, they must remain aware that framing processes may leave people "susceptible to bias, misperception, and manipulation" (Bougher, 2014, p. 252). In other words, there is a risk that once certain narratives and metaphors have provided frames for understanding and exploring learning material and processes of becoming, facts and experiences that do not fit that frame are ignored or excluded.

Goldstein (2005, p. 18), for instance, noticed that using the metaphor of the "hero's journey" in preservice teacher education enabled teachers in training to speak about their processes of becoming, but it also narrowed the range of experiences that were considered a meaningful part of becoming. A teacher could prevent this by conveying different, even conflicting narratives and metaphors.

Second, teachers *coach* learners in their storytelling, teasing out narratives and metaphors while encouraging the learners to take a writerly attitude towards the stories they tell. They should include knowledge gaps, ensuring their own storytelling is always a starting point for further narrative and metaphoric work.

Finally, teachers are *curators* of the narrative learning environment, maintaining and collecting the stories that comprise it, adding stories that can offer learners something at the right moment and foregrounding stories and interpretations that are specifically meaningful in the dialogic narrative classroom. Curating too can be readerly and writerly – and a healthy narrative learning environment is maintained in the latter way.

### **The mental and bodily processes behind narrative**

Becoming is endemic to being human, even to being itself: "The human organism (like every organism) is so to say not a being but a "becoming", i.e. being in time" (Van der Wal & Van der Bie, 2015, p. 3). If we are a becoming, an unfolding in time, we are the essence of a narrative: an event that changes over time, biologically and cognitively. Hence, narratives lend

themselves to an educational environment since they reflect who we are, and so foster the learning process.

Van der Wal (2013) claims that Cartesian body-mind dualism (cf. Damasio 1994) persists in the way that neuroscience reduces the body to the secondary role of nourishing and supporting the brain. However, there is consciousness in the embryo before it begins developing a brain and registering electroencephalography (EEG) activity at eight to nine weeks (Van der Wal & Van der Bie, 2015). If there is (some) consciousness before there is a brain, consciousness may be an embodied phenomenon.

Autobiographical narratives are not only a mental construction, they are also embodied (Damasio 2000). Damasio localises certain brain regions responsible for storing these autobiographical memories or narratives, from a perceived past to an anticipated future. It is the pinnacle of human achievement to retain such autobiographical records. When they are reactivated, they become our stories in motion. Upon activation, these memories (or “objects”, as Damasio (2000) terms them) trigger the process of core consciousness: an embodied notion of how perception works.

There is no such thing as pure perception of an object within a sensory channel, for instance, vision [...] To perceive an object, visually or otherwise, the organism requires both specialised sensory signals and signals from the adjustment of the body, which are necessary for perception to occur. (Damasio, 2000, p. 147)

In contrast to Cartesian dualism, mental perception relies on body signals.

While autobiographical narrative memory (derived from perception) is processed and stored as an event over time, core consciousness acts as a fleeting update of an organism’s holistic state. They amalgamate in working memory to become a story that is *you in motion*. Core consciousness can continually represent our inner states: the viscera and internal milieu, musculoskeletal and vestibular systems and fine-touch division. These bodily processes are mapped in the brainstem, hypothalamus and insular cortex, providing a moment-by-moment representation of the whole body. Core consciousness also maps “objects” from the world in the brain’s sensory cortices.

When an object is mapped, it alters our bodily states. These changed states are mapped back into the brainstem, hypothalamus and insular cortex (Damasio, 2000). For instance, when you see a rainbow, the visual representations in the occipital cortices send a message to the body, perhaps instigating a deeper breath. All these processes are reconfigured in the body maps in the brain.

Core consciousness, therefore, is the capacity to track the object being processed alongside how it changes the body states. It occurs in the cingulate cortices in a fraction of a second (Damasio, 2000). Because it describes how incoming stimuli change the felt-sense body, core consciousness provides a sense of agency to our perceptions and actions. It constitutes the conscious, embodied *you* that arises in these momentary perceptions, feeding the story of *you in motion*.

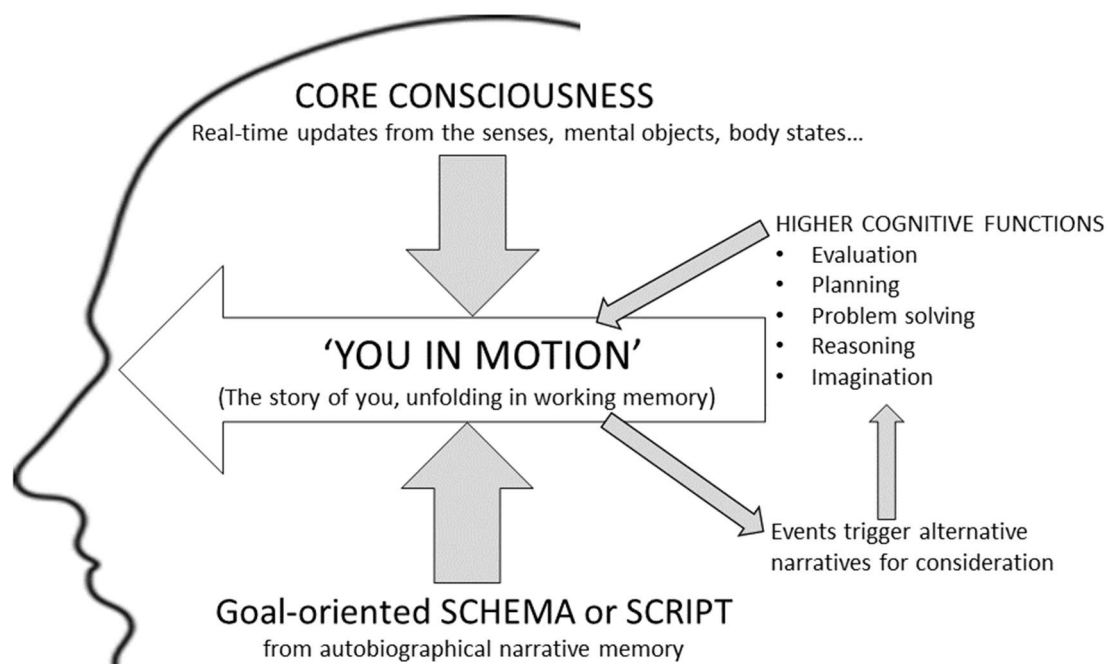
These objects can be internally (memories) or externally (sensory representations) evoked. Further, autobiographical narrative memory can retain what occurs in core consciousness since it has access to working and long-term memory (Damasio, 2000). It is built upon core consciousness, so it is also permitted a sense of agency. These narrative memories become triggered and act like objects, which are processed alongside new sensory information, resulting in changes to the body state.

We pull these autobiographical narratives from storage and combine them with core consciousness in the *you in motion*. However, they only become a story and trigger higher cognitive functions, such as problem solving and imagination, in certain contexts.

### **Transforming narrative into story**

Baboulene (2018) uses the example of the Heimlich manoeuvre to show how narrative learning is achieved in the same instinctual way when receiving a narration as it is when receiving a real-world experience (pp. 26-33). In this section, we use this work to show how narration can be crafted to trigger these instinctive learning reflexes.





*Figure 1 - you in motion*

The large arrows in Figure 1 - *you in motion* depict a mind performing a familiar activity, the script for which is retained in long-term, autobiographical narrative memory and can be re-run whenever the predictable outcome of that activity is desired. As the script runs, the person's core consciousness monitors the real-world situation. This is compared to the script in working memory and adjustments made to keep the person on track.

For example, at a meal out, your familiar *eating in a restaurant* script runs in the background and provides the narrative steps. Your senses guide the script in finding a table, choosing a meal, paying the bill and so forth. The *you in motion* continuously compares the script's requirements against the real-time situation. When they are similar, you make few demands on your higher cognitive functions, leaving you to focus on stimulating conversation. However, what happens when a diner begins to choke? The script is divergent from actual events and this triggers your higher cognitive functions (the thinner arrows in Figure 1) to establish a new narrative logic. Find a doctor? Call an ambulance? Someone uses the Heimlich manoeuvre and the victim is saved. You now have a new narrative logic. The divergence was fixed by the Heimlich manoeuvre, creating a story in your working memory that becomes a new script; one that may be triggered for you in future if another person chokes. This is the mental process involved in learning through life experience.

What happens if the experience is not a life event, but a story being told?

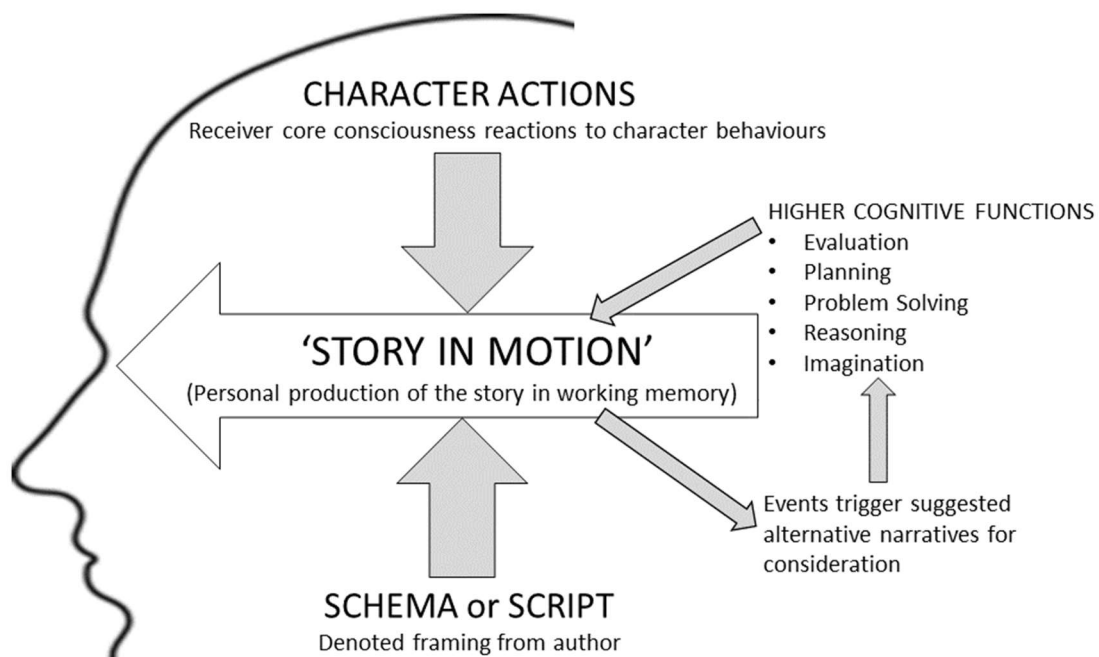


Figure 2: story in motion

Notice the subtle differences. The mind is using the same mechanisms, but the *sources of information* are different. Instead of the aims being addressed by a script from autobiographical memory, that template narrative is provided by the author. For example, the author creates a scenario where a character must have a business meal with a client. The receiver wonders: Will the meal go smoothly? Will she land the deal? The *eating in a restaurant* script running in the receiver's mind is similar to the one they would use in real life, and the characters' actions provide the equivalent of the receiver's monitoring in core consciousness.

What happens if there is divergence between the expectation set by the author (script) and the receiver's hoped-for progress through characters' actions (core consciousness)? For example, what happens if the client starts to choke? Differences exist between the expectation set by the script and the possibility of achieving the desired outcome (there is no deal if he chokes to death). These gaps trigger the receiver's higher cognitive functions to address the narrative disruption and establish a solution in the same way as they do for a real-world event. The narrative continues and the protagonist uses the Heimlich manoeuvre to save the client. The deal is sealed. The receiver of the narration learns a new narrative solution to a problem.

This has happened many times. People without medical training have experienced the Heimlich manoeuvre in a narration and later used it in the real world to save a person's life. Saviours have included children who learned the Heimlich manoeuvre from watching, for example, *SpongeBob SquarePants* and *A.N.T. Farm* (Baboulene, 2018). This is the educational power of knowledge gaps in a narrative.

## **Memory and metaphor**

Stone (2006) argues that humans have “abstract cognitive abilities that are unique to our species ... layered on top of phylogenetically older social capacities and emotions” (p. 56). For Bucci (1997), these “abstract” capabilities mask the older perceptual, motor and emotional parts of ourselves. We assert that metaphor connects our abstract cognition (including narrative) to the older, feeling parts.

Autobiographical narrative memory is declarative, a conscious storing and recalling of information (Clark, Manns, & Squire, 2001). It contrasts with non-declarative memory, which occurs via association, below conscious awareness (Clark et al., 2001). When learning to ride a bike, we condition a response between our bodily movements and what the bike does. Therefore, non-declarative memory relates to our motoric, visceral and felt-sense processes, an unconscious knowing beyond words. It involves the phylogenetically older parts while declarative memory involves our autobiographical narratives within abstract cognition. How does this relate to metaphor? Metaphors refer to mental concepts that understand one entity in terms of another, such as: “There is a crack, a crack in everything. That's how the light gets in” (Cohen, 2008). The word crack refers to the mental concept CRACK, defined as a physical break or fracture on a surface. Following Sperber and Wilson (2012), concepts give access to individualised encyclopaedic information or autobiographical narratives, which are transferred from vehicle to target concept, the one we want to know more about. Thus, the vehicle concept CRACK transfers certain qualities from the stored mental narratives to the (implied) EMOTIONAL AND MENTAL SELF, such that we may be emotionally or mentally broken. Personally, we may hold a (declarative) narrative memory of a car accident producing a crack in our car, providing the context in which we would construct a hypothesis to infer the speaker's meaning (see Sperber and Wilson (2012) for full discussion). This is different to learning by association.

However, the sight and feel of experiencing a crack in a car, supplying this felt-sense of “brokenness”, seems to be missing from the interpretation above. It requires an overlay of the association of what the body felt during the crash, from CRACK to SELF. Barsalou (1999, 2009) claims that concepts have an embodied basis, such that my concept CRACK would contain all instances of seeing, hearing and feeling cracks, including the car crash. If we combine the theories, then the embodied associations from non-declarative memory can be mapped over with declarative, narrative memories. Hence, a metaphor infuses embodiment and personal narratives into a given narrative, which can become a story and trigger higher cognitive functions if there are knowledge gaps.

### **Pilot study**

Between September 2016 and January 2017, we conducted a pilot study among first-year Bachelor students (n=75) who were training to become secondary school teachers of English or Dutch at a Dutch university of applied sciences. Because we wanted to test how storytelling facilitates being a *you in motion*, we focused on a student career coaching course intended to help students assess their study progress and prepare for their future profession.

It was designed with the course teachers (n=5) and included a series of storytelling assignments that invited students to engage in narrative work about: (1) what inspired them to become teacher trainees and memories of a teacher that impressed them as a student, and (2) their learning process during their first semester. Students were asked to keep a diary which they could then use to write a story about their learning journey.

In February 2017, we conducted in-depth interviews with several students (n=8) and teachers (n=4). These revealed that both groups valued the narrative assignments, since they raised awareness about their goals and motivation through a process of critical reflection.

The autonomy of the learning environment was made explicit to students by stressing that the linguistic standards to which they were normally held did not apply to this course since the aim was to creatively reflect on goals and motivations.

Students with little confidence in their writing skills found this helpful, while students who came from a background in which reading and creative writing were encouraged saw the exercise as an opportunity to be creative. A student who turned her study experiences into a

fairy tale said: “At the start, the assignment structure was too constraining for me. Only when I heard that I was allowed to create my own fairy tale, in any form, could I start writing.”

Furthermore, students reported a sense of freedom and security within the narrative learning environment. One stated: “This is about yourself; who you are. I expressed a lot of myself in the story. It helped that the assignment was very open, and that we did not receive a grade.”

The overall aim was for students to make sense of their educational and personal experiences and render these meaningful. Hence, the narrative assignments aimed to heighten students’ awareness about themselves as *teachers in motion*. Such assignments, we theorised, could help students perceive their studies as a series of knowledge gaps that need to be filled. By asking them to storify their behaviour, students were invited to notice gaps between their current selves and desired future teacher-selves that would enable them to develop teacher identity. A good example of what this looked like in practice can be seen in one student’s story:

There are a lot of things, which can make a highway a dirt road ... A hereditary illness made it impossible to play sports. I drove on a dirt road for two years but eventually the illness won. The wheels were too dirty.

Thus, the storytelling assignment offered the student an opportunity to creatively communicate his narrative memory and the bodily states it evoked. The image of him moving out of the dirt road self and into the highway self – a striking use of metaphor – is his way of negotiating the gap between his current self and future professional self. An awareness of such knowledge gaps encourages us to move out of well-worn autobiographical narratives and into a new story about ourselves: it helps us to work through, and at the same time facilitates, being a *you in motion*.

The questions in these assignments focused on actions and goals (cf. Moenandar and Huisman 2017): “What kind of teacher will you become? What kind of goals did/do you have? Who helped you on your path? Who obstructed you on your path? How did you deal with adversity?” These questions encouraged the students to be self-reflective about the difference between: (1) their present and desired self as a teacher; (2) their past experiences as a pupil and future teacher perspective; and (3) their individual experiences in contrast to the reactions of others. The questions led to stories that could help students understand what aspect of themselves they would like to work on or with.

An example of this can be found in a story a student told about a feared high school teacher, describing the bodily sensations (in present tense, suggesting total recall) she experienced when trying to be brave:

My grades for maths were bad, because I never dared to ask her any question. But today, I gathered all my courage, walked to her desk and asked a question about algebra. Mrs. Peterson misunderstood me and got angry. She said that I should not disturb her with stupid questions. I, a 14-year-old girl, got all red in my face but tried to explain my question again. Mrs. Peterson started to talk louder and louder while the class held its breath. Everyone stared at me, with pity. Mrs. Peterson said my red head was ridiculous and started laughing at me in front of the class. I got back to my chair and never asked a single question for the entire year.

Writing this story years later, she realised how much damage one teacher can do to an insecure student. This raises her awareness of the qualities she wants to be part of her teacher identity: she wants to be someone who connects with students, who sees their personal struggles and encourages them to learn – instead of obstructing their learning process with fear and anger.

More students moved from one possible autobiographical narrative to a new, more promising one in their stories. One first produced a narrative centred on her performance anxiety, something she thought she had somewhat overcome, but which now returned to her as a first-year teacher trainee. This narrative personified her “fear of failure” as something “making its way into my head”, causing shaking legs and a pounding heart. When asked to engage in storytelling that envisioned her professional future, she wrote: “I want to be a teacher that can create a safe environment for their pupils where everyone is accepted and respected; I want to become a teacher whose good qualities shine more brightly than her bad qualities”.

Notice the gap between her imagined future self, with its sense of calmness, and her experienced present self, in which performance anxiety is a dominant force. By using her higher cognitive functions in storytelling, she could imagine how to close this gap. Probably realising that the stilted body language holding her back is a result of her narrative of failure, she created a narrative that could be interpreted as a first step towards a desired teacher identity: “It is okay to have these tensions in my body and still succeed as a teacher for they will diminish over time”. Here, we see how storytelling facilitates being a *you in motion*: she

finds a new way to negotiate incoming stimuli from the world and from her own body, and does so by creating a new, more helpful narrative.

Both students and teachers mentioned using language and metaphor as important activities within the narrative learning environment. One teacher stated: “It is not only the message, but also the melody and rhythm in the language that makes stories powerful”. A student wrote her study experiences as a fairy tale about a king and queen’s troubled love life: the king realised that he should not take the queen’s love for granted. This metaphor enabled her to gain “an important insight: engagement in your studies does not come from above, it is something that you have to work for”.

We can also see such metaphoric work in a story in which a student discussed the teacher she imagines herself to be in ten years’ time. She does not want to be a teacher who “suppresses “unwanted” behaviour” because it is “just like rubbing out a stain on your shirt, it will only become bigger”. This comparison allowed the student to reflect on why she rejects the authoritarian teacher type: it is, ultimately, ineffective. It also allowed her to associate strong felt-sense and bodily sensations of frustration with teaching behaviour she dislikes. Thus, the type of teacher she *does* want to be – one for whom teaching is more about wanting students to learn “how to learn” than to obtain “grades” – becomes even more desirable. By playing out bodily states and imagination, this teacher in motion has created a future self to aspire to. The teacher’s role as a conveyor of stories and curator of the narrative learning environment was expressed during several interviews. To establish a safe and free learning environment, teachers modelled the kind of storytelling they want their students to engage in. One described how writing a story and reading it to her students “made me feel vulnerable, but in a good way. I realised that at that moment, I was a model of a teacher who is not afraid to show some personal vulnerability”.

Other teachers described how, when curating the narrative environments by discussing and interpreting their own and student stories, they foregrounded values important to a teacher’s identity and invited students to react to them and to negotiate these values through additional narrative work. In response, one student said: “this is a real good way of learning. It makes you think in a different way, more intense”. So, students indeed experienced that “knowledge gaps” helped them find new ways of perceiving themselves.

To enhance the writerly nature of the narrative and metaphoric work during the course, the stories were used as starting points for reflective dialogue in classroom settings and individual coaching sessions. Students appreciated this. One described how this offered an opportunity to reflect upon his experiences as a *you in motion*:

My teacher wanted me to be honest and he was open himself. I had some personal issues that affected my motivation for my studies. I find it hard to talk about emotions, I'm not like that. By writing a story, I found a safe way to tell my teacher what was bothering me. We talked about it and afterwards I felt very relieved. Right now, I feel confident again about my ability to study.

We would argue that such comments show that although narrative and metaphor are good aids for working through study experiences, there is added value in letting narrative and metaphoric work take place in a dialogue. Students' higher cognitive functions, already activated when engaging in narrative work to deal with knowledge gaps, are further involved when the narrative work becomes writerly. Sharing his story, interpreting it together with his teacher, helped this student develop a new story in which he found it easier to manage his study stress.

Teachers found a lot of value in the students' openness in their stories. As one teacher claimed: "The stories changed my view on [the] students. It was surprising how open they could be!" Thus, the narrative dialogue intensified the interpersonal relations between student and teacher. Working through experiences by creating metaphors and describing bodily states also has a strong affective dimension, as one teacher noted: "It was much more fun [...] than the way I used to work. The stories provoked students to describe real experiences, instead of socially acceptable reflection diaries."

## **Conclusion**

The notion that storytelling is useful in education is not new. However, we assert that educational narrative work must be writerly to ensure that storytelling truly benefits the processes of becoming that take place within learning environments. We have supported this view by combining insights from cognitive research on storytelling, narrative sociology and explorations of narrative and storytelling by literary scholars and philosophers. Our case study showed how, through the stories the students and teachers convey and the metaphors they use in such a narrative learning environment, students become aware of gaps between how they



are now, and how they may desire to be. They must use their higher cognitive functions to fill in these gaps (evaluating their behaviour, thoughts, etc.). The teacher created a relatively autonomous learning environment, coached students to storify their study experiences, and kept the narrative and metaphoric work writerly by active curating. This inspired students' personal intellects to negotiate the knowledge gaps created by these experiences, arguably preparing them for future scenarios. The result was a learning environment in which study motivation was regained relatively easily, cognitive and affective exchanges happened freely, and – perhaps most importantly – learning and teaching became ways to have fun.

## References

- Baboulene, D. (2018). *A constructivist narratology*. London, UK: DreamEngine.
- Barsalou, L. W. (1999). Perceptual symbol systems. *Behavioral and brain sciences*, 22, 577-660.
- Barsalou, L. W. (2009). Simulation, situated conceptualization, and prediction. *Philosophical transactions of the royal society B: Biological sciences*, 364, 1281-1289.
- Barthes, R. (1990). *S/Z*. Oxford, UK: Blackwell.
- Bougher, L. D. (2014). Cognitive coherence in politics: Unifying metaphor and narrative in civic cognition. In M. Hanne, W. Crano and J.S. Mio (Eds.), *Warring with words: Narrative and metaphor in politics* (pp. 250-271). New York, NY: Psychology Press.
- Bucci, W. (1997). *Psychoanalysis and cognitive science: A multiple code theory*. New York, NY: Guildford Press.
- Clark, R. E., Manns, J. R. & Squire, L. R. (2001). Trace and delay eyeblink conditioning: Contrasting phenomena of declarative and nondeclarative memory. *Psychological Science*, 12(4), 304-308.
- Cohen, L. (2008) *Anthem*. (Online) Available at: <https://www.youtube.com/watch?v=mDTph7mer3I>. [Accessed: 20 March 2018].
- Damasio, A. (1994). *Descartes' error: Emotion, reason and the human brain*. London, UK: Vintage.
- Damasio, A. (2000). *The feeling of what happens: Body, emotion and the making of consciousness*. New York, NY: Vintage.
- Dettori, G. and Giannetti, T. (2006). *A concise introduction to narrative learning environments*. Genova, Italy: ITD-CNR.

- Egan, K. (1997). *The educated mind: How cognitive tools shape our understanding*. Chicago, IL and London, UK: Chicago University Press.
- Goldstein, S. (2005). Becoming a teacher as a hero's journey: Using metaphor in preservice teacher education. *Teacher Education Quarterly*, 32 (1), 7-24.
- Gubrium, J.F. and Holstein, J.A. (2009). *Analyzing narrative reality*. Thousand Oaks, CA: Sage
- Korthals Altes, L. (2014). *Ethos and narrative interpretation*. Lincoln, NE and London, UK: University of Nebraska Press.
- Moenandar, S.J. and Huisman, K. (2017). Towards a narrative student career counselling. In S.J. Moenandar and L. Wood (Eds.), *Stories of becoming: The use of storytelling in education, counselling and research* (pp. 127-156). Nijmegen, The Netherlands: Campus Orleon.
- Nussbaum, M. (1992). *Love's knowledge*. Oxford, UK: Oxford University Press.
- Saban, A. (2006). Functions of metaphor in teaching and teacher education: A review essay. *Teaching Education*, 17 (4), 299-315.
- Simons, M. & Masschelein, J. (2012). School – A matter of form. In P. Gielen and P. De Bruyne (Eds.), *Teaching art in the neoliberal realm* (pp. 69-98). Amsterdam, the Netherlands: Valiz.
- Sperber, D. & Wilson, D. (2012). *Meaning and relevance*. Cambridge, UK: Cambridge University Press.
- Stone, V. (2006). The moral dimensions of human social intelligence: domain-specific and domain-general mechanisms. *Philosophical Explorations*, 91(1), 55-68.
- Tesselaar, S. and Scheringa, A. (2008). *Storytelling handboek. Organisatieverhalen voor managers, trainers en onderzoekers*. Nijmegen, The Netherlands: Boom.
- Van der Wal, J. (2013). The embryo in us: A phenomenological search for soul and consciousness in the prenatal body. *Journal of Prenatal & Perinatal Psychology & Health*, 27 (3).
- Van der Wal, J. & Van der Bie, G. (2015). The incarnating embryo - The embryo in us, human embryonic development in a phenomenological perspective. In T. Liem (Ed.), *Osteopathic energetics: Morphodynamic and biodynamic principles in health and disease*. Pencaitland, UK: Handspring Publishing.