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# Thinking Deeply, Creating Richly: Learner Transformation Through Narrative

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THINKING DEEPLY, CREATING RICHLY: LEARNER TRANSFORMATION THROUGH  
NARRATIVE

by

KAYLEA H. CHAMPION

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SYNTHESIS\*  
MASTER OF ARTS  
CRITICAL AND CREATIVE THINKING  
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Abstract: Narrative methods support transformative teaching and learning by accessing human cognitive strengths, including memory, reflection, and self-awareness. This paper explores the enduring and mindful use of narrative in education – as a method for transformative teaching and learning. A narrative is the intentional conversion of a group of events, participants, and details into a constructed reality that illustrates causes, characters, and results. Narrative development is a native human process by which we teach, learn, and remember. Narrative educational methods incorporate two key characteristics: integrative sense making, and shared connection building. Diverse disciplines – including biology, psychology, economics, literature, medicine, history, and education – have explored narrative as a foundational component of our human capacities, relationships, and achievements. Exploring the uses and misuses of narrative offers insight for teachers and learners of all ages. The paper closes with a discussion of the role this investigation is having in my personal and professional development.

Keywords: narrative education, progressive education, pedagogy, adult education

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\* The Synthesis can take a variety of forms, from a position paper to curriculum or professional development workshop to an original contribution in the creative arts or writing. The expectation is that students use their Synthesis to show how they have integrated knowledge, tools, experience, and support gained in the program so as to prepare themselves to be constructive, reflective agents of change in work, education, social movements, science, creative arts, or other endeavors.

Call me Ishmael. Some years ago – never mind how long precisely – having little or no money in my purse, and nothing particular to interest me on shore, I thought I would sail about a little and see the watery part of the world.<sup>1</sup>

— Herman Melville, *Moby Dick*

Narrative is power. The first lines of great novels immediately trigger memories, emotions, and ideas. The stories we tell and remember about our past describe who we are and from where we have come. The stories we tell about the workings of the world form the basis for science and religion. Through narrative, we make meaning of the events in our lives and explain the world unfolding around us. In this way, narratives are a fundamental cognitive activity in human behavior and culture. Narratives offer us characters and causes, effects and ends. Whether gathered around a campfire, curled up with a book, arguing a point of view, becoming drawn into actors playing out roles on a stage or screen, or building a plausible explanation for what we are observing, we construct and interact with narratives constantly.

Our brains build narratives as part of both explaining and remembering what we know, observe, and experience (Dahlstrom 2014). Not only is narrative formation a significant component of human cognition, the construction of narratives is a skill that can be practiced and improved by anyone. Thus, the deep-rooted human capacity for narrative can be harnessed both by instructors and by students, bringing together data and facts with perspectives, emotions, and experiences, in order to improve critical thinking and understanding.

Yet the capacity for narrative construction is sometimes assumed, rather than taught and studied – neglected, rather than practiced and improved – downplayed, rather than explored and celebrated. Narrative construction can also be seen as a luxury, not a universal. Narrative is most often considered a characteristic of the humanities and social sciences at a time when the drive towards STEM learning seems almost ineluctable (Williams 2011); no matter that STEM topics

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benefit from the use of an integrative teaching approach (combining narrative with propositional pedagogy) just as much as ethics, history, and psychology do (O’Neil, Haydon, & Simon, 2014; Smith, Douglas & Cox, 2009). One symptom of the misunderstood nature of integrative teaching strategies is our national drive to gear education towards performance on standardized tests. This shift seems especially to characterize those public schools eligible for funding through such federal programs as No Child Left Behind and Race to the Top. However, elite private schools have not tended to embrace frequent high-stakes exams, which suggests support for a more holistic model of education for the children of elites, but not for the rest of us (Goyal 2016, Ravitch 2015). Re-discovering the innate human qualities of narrative education, as part of a national conversation about what education can and ought to be, offers us a pathway towards re-capturing the values and broad applicability of progressive education for both children and adults, of any social class.

Midway upon the journey of our life  
I found myself within a forest dark,  
For the straightforward pathway had been lost.

— *Divine Comedy*, Dante Alighieri<sup>2</sup>

In this enduring work, Dante takes readers on a narrative journey. We travel at his side into an underworld, purgatory, and heaven that reflect his contemporaries’ Christian beliefs about the nature of the afterlife. Simultaneously, readers travel through the mind of the protagonist, witnessing the condemnation of Dante’s contemporary political enemies. We share the psychological and theological struggles of a man in exile, one who has lost his own way in life and must seek both knowledge and redemption.

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<sup>2</sup> Translation by Henry Wadsworth Longfellow, published in 1867.

In environments that support adult or lifelong learning, the use of narratives for reflecting on one's life journey has a long history (Rossiter 2002). Participants might write autobiographies or engage with support groups that emphasize the sharing of experiences. Self-help and therapeutic books may rely on narrative techniques such as journaling and reflection to promote learning from life experiences. One example of these techniques is exemplified in Palmer (2000), wherein the author describes his process of learning to listen to himself and his own life story, including a journey out of depression and the discovery of the kinds of work he determines that he is meant to do.

Building on the fundamental human capacity for narrative allows teachers to reach their students more broadly and deeply. This is true whether education is taking place inside a K12 school, at a college or university, or through any of the many lifelong learning environments: adult education classes, support groups, hobbyist workshops, online learning sites such as Coursera, edX, or Udacity, or simply independent study through reading, discussing, experimenting, etc. Exploring their personal power of narrative allows learners to push themselves into new areas of self-discovery. Whether delivered as an excellent lecture, a well-written essay, a short story, or a convincing research paper, narratives in an educational context allow us to synthesize multiple sources of information in a manner that is memorable and thought provoking – to both the author and the audience.

Narrative education as an intentional method is a natural extension of the human capacity to teach and learn through narrative (Rossiter 2012). Taken as an overarching strategy or philosophy rather than a specific tactic, narrative education seek to teach in the ways that we learn, to encourage teachers to learn alongside their students, and to build the capacity to self-teach: through experience and reflection. Ultimately, meaning-making is a process of converting

information into a coherent thread of explanation which carries through all dimensions of a subject: comprehending the workings of the human body, envisioning the flipping of a valve in an engine, internalizing the spinning of the earth through space, participating in the birth and growth of a high-functioning work team, or sensing the flow of capital through markets.

The following sections of this paper offer the research-driven backing argument for these contentions. The first section, *What Is Narrative?*, further explores narrative's significance from a cultural, psychological, and biological point of view. The *Examples and Practices* section summarizes the findings of published research examples from such diverse fields as organizational development and marketing to patient education and geography. The *Disagreements and Concerns* section dives into contrarian views of narrative, which highlight both the risks inherent in narrative and limitations to the immediate utility of a narrative approach. The *Conclusions* section brings both the arguments and counter-arguments for narrative into what it is hoped will be a more productive conversation, while *Future Directions* will convey next steps in my own personal and professional development, building on this paper.

### **What is Narrative?**

Tell me, Muse, of the man of many ways,  
who was driven far journeys, after he had  
sacked Troy's sacred citadel.

— Homer, *The Odyssey*<sup>3</sup>

### **Narrative as Cultural Phenomenon**

Odes and epics offer some of the earliest examples of cultural narratives, offering insight into what a people valued, how they thought of themselves and from where they believed themselves to originate. Historians may find truth and obvious fiction intermingled, along with

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<sup>3</sup> Translation by Richmond Lattimore, 1965. Published by Harper & Row, New York.

tantalizing but unverifiable details. Early chroniclers describe the journeys of their peoples and heroes alongside religious miracles, often without detailing sources or providing primary evidence, weaving a story of *origin* — how a people came to be who and where they are — and *identity* — emphasizing cultural values and accomplishments. The Epic of Gilgamesh, the Odyssey and Iliad, the Aeneid, the Old Testament, and the Mahabharata all tell stories of heroic exploits, supernatural dangers, and human friendship.

Early human history is understood not only through extant narratives, however. Archaeologists and anthropologists construct narratives from the evidence they accumulate through scientific processes, developing a description of what is most likely to have occurred. Cave-wall paintings tell of hunting rituals. Potsherds and grain receipts shed light on societal structures. Layers of packed earth indicate roads. Burial sites suggest technical accomplishments, cultural practices and societal priorities. The stories constructed from this evidence both allow us to understand ancient peoples, and offer insight into our own culture.

One example of this narrative-building from physical evidence comes of comparing the legal codes of ancient peoples. Some cultures emphasized physical punishment, others were more concerned with economic reparation. Some detailed the duties of citizens as participants in the workings of the society, while others emphasized obedience to a king, religious figure, or admixture of the two. Legal codes often declare who is legally defined as a person versus who is to be treated as property, and make distinctions between the rights of men and women, citizens and non-citizens, adults and children. From these details, we can begin to tell stories about what living under these laws must have been like. Future archaeologists and historians are likely to make the same kinds of inductive arguments about our society. We can ask ourselves if we are indeed the people we want to be, as reflected in what we have codified and will leave behind.

From the Middle Ages to modern times, rising literacy levels and production efficiencies of the printed book allowed the dissemination of narratives to move from the voice of the poet and balladeer to the bound and printed page. As Europeans explored the globe, they created and spread their own stories, not only describing the wonders they saw, but generating an understanding of identity for European peoples – their place in the world relative to others whom they encountered (Zumthor & Peebles, 1994). These narratives might take the form of describing a pilgrimage, and exhort others to follow them, or be more commercial, concerning costs, distances, and trade goods. Such accounts might be carefully recorded non-fictional accounts, or dubitably presented as non-fiction, as in *The Travels of Marco Polo* by Rustichello da Pisa and *Journey Overseas*, by John Mandeville, or clearly fiction (although fiction with a purpose beyond entertainment), as in Swift's *Gulliver's Travels*.

Centuries later, the spread of the popular novel offered both entertainment and new perspective on topics of concern – works from Jane Austen and the Brontë sisters offer both cultural insight and psychosocial perspectives into limitations placed on women in society, while science fiction yarns such as *Frankenstein* offer both thrilling entertainment and serve as case studies to open up substantial ethical questions. Extended metaphors – sometimes called thought experiments – have also long held a place in the development of theoretical models, whether socio-political, as in Socrates' cave, Plato's just republic, and More's quasi-religious *Utopia*, to the physical, as with Einstein imagining himself on a beam of light as he developed his theories of relativity. The narrative form can bring a problem to vivid life in our mind's eye, and raise questions from multiple perspectives not our own, by using the point of view of characters who might otherwise be outside our personal interactions.

When on board H.M.S. Beagle, as naturalist, I was much struck with certain facts in the distribution of the inhabitants of South America, and in the geological relations of the present to the past inhabitants of that continent.

— Charles Darwin, *The Origin of Species*

Scientific writing has long included both propositional and narrative elements.

Propositions offer provable facts, but the narrative provides the argument – the grounds, the reasoning, and the conclusion. As Konnikova (2015) describes, “There is no scientific method without the narrative thread that holds the whole enterprise together.” (p. 4). Science in praxis has long included not only a motivation to discover and understand, but also a motivation to disseminate those findings — not only to fellow scientists, but also often to the broader educated class, including both persons of influence and potential patrons. Adam Smith’s 1776 publication of *Wealth of Nations*, with its mix of both economic propositions and narrative descriptions of the operation of markets under different conditions, offered insight not only to generations of government policymakers but also the growing populations of businesspeople (Phillipson 2010, p. 1). When Charles Darwin published his *Origin of Species* in 1858, his work triggered broad debate among the gentry and clergy as well as academic circles (Thomson 2000).

In an example of further popularization, Rachel Carson published *Silent Spring* in 1962, with the particular intention of drawing public attention to a substantial environmental crisis. Her work became an immediate best seller (Lear 2016). As Lear (2016) describes:

*Silent Spring* began with a “fable for tomorrow” – a true story using a composite of examples drawn from many real communities where the use of DDT had caused damage to wildlife, birds, bees, agricultural animals, domestic pets, and even humans. Carson used it as an introduction to a very scientifically complicated and already controversial subject.

By casting their discourse into more generally understood language and telling the stories of their discoveries and thinking processes, Smith, Darwin, and Carson shifted into the role of public intellectual. Science narratives offer the interested public an opportunity to step inside the imagination of the researcher, and see the facts from their eyes, the weaving together of causes and effects to produce the world as we know it — or perhaps, don't know it quite yet. These narratives offer the general public a more appealing and comprehensible view of modern scientific understanding than do traditional journal articles or other more propositional modes of communication (Dahlstrom 2014).

Although some scientists such as Stephen Hawking and Neil deGrasse Tyson may write their own science narratives, some scientists may also collaborate with non-science writers and journalists, as in *Freakanomics* by Levin and Dubner. Biochemist Isaac Asimov wrote prolifically across genres, publishing mysteries, science fiction, popular non-fiction and textbooks. Other widely read science narratives are written by non-specialists investigating and analyzing the work of specialists, such as the economics book *The World Is Flat* by Thomas Friedman, or the developmental and parenting psychology work *Nurtureshock* by Po Bronson and Ashley Merryman. These works help to translate scientific thinking from propositional description into a narrative argument in order to allow the latest discoveries and theories to be broadly understood.

### **Narrative as Biological Phenomenon**

I am an invisible man. No, I am not a spook like those who haunted Edgar Allan Poe; nor am I one of your Hollywood-movie ectoplasms. I am a man of substance, of flesh and bone, fiber and liquids -- and I might even be said to possess a mind. I am invisible, understand, simply because people refuse to see me.

— Ralph Ellison, *Invisible Man*

Narratives are not only artifacts of human cultures, but also have been found to connect to basic biological and neurological functioning. To explore the ways that narrative activities interact with biology, this discussion will turn for a moment to consider in some detail the behaviors that are prompted at the hormonal level in response to storytelling.

[Figure 1]

Economists, behavioral scientists, and psychologists have conducted extensive studies on the role of neurochemistry, specifically the role of the hormone oxytocin in such pro-social behaviors as trust, empathy, and generosity (Zak 2012, Lin et al. 2013, Shamay-Tsoory et al. 2013, Zak 2015). Zak (2012) has found that storytelling can generate empathy, which generates trust – and an extension of trust triggers an extension of trust in return. Zak (2012) found that this state of mutual trust is a key underlying factor in the prosperity of countries – people who trust one another trade more, invest more, and engage in more innovative and cooperative activities.

Zak (2012) found that oxytocin is released when we experience positive physical interactions, positive social interactions, or make connections to others, and that when oxytocin surges are higher, people respond to situations with greater generosity, sympathy, emotional involvement. Oxytocin is thought to create the feeling of bonded attention between mothers and children, between partners and family members, as well as create a sense of familiarity (Zak 2012). The impact of oxytocin is limited – hormonal response is not destiny; people can consciously control their responses to situations regardless of their oxytocin levels. However, statistically, the impact is substantial and measurable (Zak 2012).

It is worth noting that some people, such those who have been abused, may not respond to oxytocin surges in the same way. Their dysregulated oxytocin (and cortisol) systems may

make them emotionally flat, and inordinately trusting or suspicious (Zak 2012). Zak (2012) found that about 5% of the college students who comprised his typical study population have what Zak terms “Oxytocin Deficit Disorder” (p. 104). Deficit is something of a misnomer – the body’s response is to oxytocin surges, not the net level. Although this group has high levels of oxytocin in their bodies, they do not generate oxytocin surges in response to social interactions.

People with non-socionormative conditions such as autism or psychopathy are thought to have impairments in their oxytocin systems (Zak 2012). Some researchers are pursuing the development of treatments that would increase the number of oxytocin receptors and potentially have application to ease some of the symptoms of oxytocin dysregulation, including the aforementioned autism and psychopathy, as well as Urbach-Wiethe and Williams syndrome<sup>4</sup> (Zak 2012).

The connection between this biological exploration and the narrative topic at hand is that narrative offers a means for intentionally generating empathetic responses in our listeners – their warmth, trust, generosity, cooperation, and so on. Zak (2015) evaluated the generosity levels that were triggered by two videos: one an emotional narrative with a full story about a child with cancer going to the zoo, the other a charitable appeal with the same characters depicted but no narrative arc, developed as a control. The video with an emotional story arc triggered a higher willingness to donate to a cancer charity than did the control (Zak 2015). Lin et al. (2013) found that the general public is more likely to respond to public service advertisements that incorporate content that triggers oxytocin release, such as via an emotional story arc. In essence, narrative can generate empathy, and empathy releases oxytocin – which demonstrably changes behavior.

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<sup>4</sup> Williams and Urbach-Wiethe are genetic disorders that result in lead to people being extremely trusting, due to an inability to read negative social cues. Sufferers lack the ability to sense fear, malice, or other kinds of danger from others.

Oxytocin's role in promoting empathy is not restricted to situations of strong pre-existing social identification. Shamay-Tsoory et al. (2013) evaluated the role of oxytocin in perceiving pain and suffering within the context of a seemingly intractable global dispute – the Israeli-Palestinian conflict. Shamay-Tsoory et al. (2013) found that oxytocin increased Israeli Jewish participants' levels of reported sympathy for the pain of Palestinians; in the absence of oxytocin, the reported sympathy levels were substantially lower.

The power of storytelling has also been observed in group conversational dynamics. In *Theory U*, Otto Scharmer (2009) describes a storytelling phase in the formation of an effective organization, corporation, or culture. Scharmer models the phases a group might progress through as a set of four conversational fields. A group seeking to come together and make change has the opportunity to move from surface politeness (Field I), into serious and sometimes contentious discussion (Field II), then to deeper and more meaningful conversation (Field III), and finally to a high-performing state of creative mutual work in a flow-like state (Field IV) (Scharmer 2009).

Scharmer (2009) has found that shared stories, especially speaking from a more universal point of view, can help a group move out of the second phase of debating (Field II) and into a state of reflective inquiry (Field III). Once this shared understanding is realized, the group can engage in a process of dialogue, which Scharmer (2009) defines as “thinking together from diverse perspectives“ (p. 240). From this mutually engaged state, a group can potentially move towards collective creativity (Scharmer 2009).

Kahane (2002) describes the powerful experiences possible when adopting this perspective on the importance of shared storytelling. Kahane (2002) describes the application of this multi-staged perspective on the conversations that developed in a program for reconciliation

after the protracted violence of the civil war in Guatemala. As the reconciliation working group began to share stories of their experience during the conflict, the conversation was able to move away from blame and debate and into the shared reflective inquiry of Scharmer's Field III. The group members' authentic voices emerged and they began to develop a shared understanding of how the country might heal and move forward (Kahane 2002).

The brain's response to a fictional story is similar to the response to real-life experiences: when recollecting a fictional story, we have better recall for objects located in the same room as a main character, and more recall for events that are more recent within the arc of a character's life (Marshall 2011). And fMRI studies show us that the brain responds to fictional stories in similar ways as it does to real-life analogous situations (Marshall 2011). These changes in the brain may remain for days afterward (Jivanda 2013).

Narrative structures of information, in which each detail and character is given a context and a connection to other information, also align with the current understanding of memory and recall (Dahlstrom 2014). One common schema to express narrative structure describes five phases: Introduction, Rise, Climax, Return or Fall, and Catastrophe<sup>5</sup> (Freytag 1863).

[Figure 2]

The introduction sets the scene and indicates the characters as well as their problem. The rising action shows the characters' struggle with the problem growing ever more intense. The climax brings the conflict into preliminary resolution. The falling action resolves plot points and the aftermath of the climax. The catastrophe or exit provides some final beat (Freytag 1863). The catastrophe is perhaps less starkly defined in modern uses of Freytag's Pyramid – we may indeed

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<sup>5</sup> Catastrophe is followed by a restoration of peace and quiet. Freytag's analysis is largely based on classical and Elizabethan drama, although he does mention that "modern tender-heartedness" (p. 137) may lead to sparing the life of the hero. Modern theorists using Freytag's pyramid tend to substitute *Denouement* for *Catastrophe*.

see the hero's inevitable doom, or a lingering mystery suddenly revealed, or perhaps instead we'll hear a final joke before fading to black.

This structure is found not only in popular and classic books, but also in stand-up comedy routines, compelling lectures, mind-changing magazine articles, successful films, and popular television commercials. Narratives need not be drawn-out epics — concisely crafted stories are often loaded with meanings. The parables in the New Testament, Aesop's fables, and viral videos are brief, yet have wide appeal in re-telling or popular re-sharing. Quesenberry and Coolson (2014) studied 108 commercials aired during the Super Bowl, and found that the highest-rated commercials were those which accomplished a five-act narrative structure based on Freytag's pyramid: Exposition, Complication, Climax, Reversal, Denouement. As the number of acts rose, so did the consumer appeal of the commercial (Quesenberry & Coolson, 2014).

Narratives are powerful in part because of their general alignment to the structure of human cognition (Dahlstrom 2014, Rossiter 2002), which is composed of navigable links. “According to many theorists, memory is best thought of as a vast network of ideas.... [T]hink of these representations as nodes within the network tied to each other via connections we'll call associations, or associative links. “ (Reisberg 2013, p. 206). Recall — the ability to bring back those memories for use in later processing — is a process of traversing those associative networks in search of the information needed. As we recall information we have been exposed to, we re-construct a story based on what we can readily retrieve. The more connections a person can make among the pieces of information being learned, the more likely they are to be able to retrieve that information in the future (Reisberg 2013).

Deep processing (Reisberg 2013) is the building of associative networks of sufficient size and complexity that the information will be readily retrieved in the future and readily connected

with new information. Shallow processing might look more like pre-exam cramming — the storage of memories which are mostly isolated and unconnected. Once used as part of the activity for which they were learned (passing a test the next morning, for example), these memories might not be retrievable (Reisberg 2013). Narrative structures, then, allow teachers to present information in the manner closest to which it is being remembered, supporting the building of associative networks and the development of deep processing. The more engaging the material, the more real it seems to the mind, the more connections are built and the more retrievable the information becomes.

Rossiter (2002) summarizes the breadth of research into narrative writing as a fundamental practice for the making of meaning. Rossiter (2002) contends that teaching and learning are the process of making stories of information, and reminds us that psychology research has taught us that learning is more efficient when encoding is the same between how we take info in and how we recall and reuse it. Essentially, stories work because they are believable, entertaining, and can be remembered readily. “And we can conclude that narrative – in its many manifestations – functions as a powerful medium of learning, development, and transformation.” (Rossiter 2002, p. 2).

Not all narrative presentations of information need be classic storytelling per se – mnemonic devices are widely understood as effective mechanisms (Reisberg 2013). In building a mnemonic device, we essentially create narrative-like connections among disparate pieces of information, organizing the information for later retrieval. Even a nonsense association can be helpful: we might create a password from a phrase we remember, or turn the tiers of animal taxonomy into a sentence (“King Philip Crossed the Ocean to Find Gold and Silver”, as a device

for remembering kingdom, phylum, class order, family, genus, species, as reported in Reisberg 2013).

More than 25 years ago, in music class, I learned the note-names of the lines of the G-clef with the sentence Every Good Boy Deserves Fudge; the Bass clef was memorized with Good Boys Do Fine Always. In Spanish class, likewise 25 years ago, we made up our own class mnemonic to remember the countries just south of the US – devising “My Grandma Betty Entertains Her Neighbors Crushing Potatoes.” This stood for Mexico, Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama. Creating narrative-like connections among pieces of information can also trigger the production of images, another source of memory retention and a powerful mechanism for retrieval (Reisberg 2013).

Not all information readily supports transmission in a narrative mode. Chekhov would say that the gun we see in the first act ought to go off in the third — but in real life, sometimes the gun goes off immediately, sometimes never, and sometimes repeatedly. There are many phenomena as yet unexplained in the world, unknown and perhaps unknowable details, and many coincidences, all of which may not readily translated into a story. The impacts of these and other epistemological challenges are discussed further in the *Disagreements and Concerns* section of this paper.

### **Examples and Practices**

From the beginning, our lives lay down clues to selfhood and vocation, though the clues may be hard to decode. But trying to interpret them is profoundly worthwhile—especially when we are in our twenties or thirties or forties, feeling profoundly lost, having wandered, or been dragged, far away from our birthright gifts.

— Parker J. Palmer, *Let Your Life Speak: Listening for the Voice of Vocation*

For the purposes of this exploration, narrative has been broadly defined as the intentional conversion of a group of events, participants, and details into a constructed reality that illustrates causes, characters, and results. Narrative educational methods incorporate two key characteristics: integrative sense making, and shared connection building. This portion of the paper explores the ways in which narrative can be incorporated into a variety of educational and mutual learning environments – in traditional schools, in support groups, inside of reconciliation projects, and in organizations.

The practice of telling and exploring one’s story can be a powerful activity for healing. Narrative offers people the opportunity to step outside of living their stories, so as to be the teller of it. This modest distancing from their own story offers the teller a chance to take a just-outside perspective, not only with their own voice but also in consideration of the hearers. “Stories provide the frames that make it possible for us to interpret our experience, and these acts of interpretation are achievements that we take an active part in.” (White 1995, p. 15)

A personal narrative allows the teller to explore causes and effects. The general expectation of a narrative arc – a series of struggles, followed by wisdom or triumph, can encourage both learning from the past and discovery of that triumph. Arriving at the ending allows the teller to consider how the story brought them to where they are today (White 1995). Storytelling also allows exploration of character reframing – a victim can recast her story as a survivor, and a sufferer can retell his story in the character of a fighter. Support groups those in addiction recovery often encourage telling one’s own story (Halonon 2006). Virtual communities such as *When You’re Ready*<sup>6</sup> provide a locus for survivors of sexual assault to share their stories. In a therapeutic context, personal narratives may not be strictly what White (1995) calls “representational” (p. 14) – that is, not as simple as taking a new perspective – but rather part of

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<sup>6</sup> <http://whenyoureready.org/>

a process of separating oneself from one's problems, to allow for what White (1995) calls "deconstruction" (p. 24) and then "re-storying" (p. 25).

These personal stories also benefit the hearer by explaining the lives of a previously unknown "other", generating not only empathy – that crucial social glue – but also opening up the possibility that other, as-yet-unknown people might also have a story to tell. Knowing the stories of others in our midst allows us to, as Rev. John Watson bid us, "be kind, for every man is fighting a hard battle"<sup>7</sup>.

The Works Progress Association Federal Writer's Project included a Folklore Project, which sought to collect the stories of everyday people across the country. Through this project, modern scholars have access to a rich collection of first-person accounts from perspectives that otherwise are under-represented in this historical record, including the life histories of former slaves, perspectives on daily life during the Depression, urban and rural folklore. This tradition of collecting stories to preserve historical understanding has continued to the present day.

Since 2003, the National Public Radio StoryCorps project has captured stories as told between two people, sharing those stories through not only an online archive but also a regular radio program. Listener surveys in 2015 found that these stories improved their listeners' understanding of a broad range of marginalized or minority-status people, including those with disabilities, immigrants, Latinos, African Americans. The surveys also found that hearing these stories brought listeners more awareness of shared humanity and helped them to see the value of people different from themselves ("About", 2016).

Emerging media technology has broadened the possibilities developing an audience and community around these kinds of projects. For example, the Humans of New York project is the

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<sup>7</sup> The precise source of this quote is somewhat debated; a summary of this debate is available at <http://quoteinvestigator.com/2010/06/29/be-kind/>.

effort of a single man, Brandon Stanton, to evoke the lives of everyday people through photographs and brief first-person accounts. The stories are posted on a blog and then disseminated through multiple social media channels. His site now has over 8 million social media followers (Stanton 2016), and he has taken his approach abroad, traveling to Pakistan and Iran to take photos and collect stories in order to build cross-cultural understanding. This collection of materials has had impacts beyond the immediate understanding of individual readers. Numerous fundraising campaigns have been devoted to alleviate the suffering of some of the individuals Stanton has profiled. As an example of impact beyond the immediate context of the site, Acchiardo, Al-Bahrani, Holder, and Dirk (2015) approached the story collection and social community generated by the Humans of New York project as a mechanism for teaching principles of economics.

Personal narratives — the stories we tell about ourselves, our lives, who we are, and how we became to be who and where we are – are valuable expressions of identity. Khullar (2016), an emergency room physician, describes the value he found in understanding the life stories of aging and critically ill patients, and further found that his clinical experiences were reinforced by research studies (McKeown et al. 2010; Wills & Day 2008; Clarke, Hanson, & Ross 2003). Wills and Day (2008) found that patient life story projects were able to capture rich details about patients and their identities – including their social history, religious attitudes, and identity, which supported the implementation of patient-centered care.

Clarke, Hanson, and Ross (2003) and McKeown et al. (2010) found that by developing a practice around understanding patient life stories, medical professionals are better able to understand their patients' needs, to build stronger relationship with patients' families, and to better care for their patients as individuals. Patients were also better able to participate in their

own care. In McKeown et al. (2010) – which focused on life story work with dementia patients – patients were able to also use the artifacts developed as part of the life story practice as a way both to remind themselves of their own story, as well as to communicate more about themselves with others, even when speech was difficult.

Nehls (1995) describes a narrative pedagogy approach to nursing, beginning with the historical practice of incorporating clinical case studies and then building on this practice by describing what might go on in a narrative pedagogy classroom when the teacher joins the students in a quest for knowledge and understanding by exploring not only the teacher’s stories but also the students’ stories. This process not only encourages students to learn from many different kinds of experiences but also gives them guided practice in learning from their own experiences. Nehls (1995) describes the advantages of narrative pedagogy as offering contextualized learning that encourages critical thinking, reflection and self-development, as well as the creation of a caring learning community, which may translate to caring practices.

McPartland (1998) finds that effective teaching in geography incorporates narrative in order to “nurture the geographical imagination” (p. 346). Narrative teaching allows students to develop an understanding of not only the description of a place, but also how a place changes through time, and how the details of place impact the history of human interactions within that place (McPartland 1998).

Encouraging the use of narrative can also work to bridge the social interaction gap that can present itself in online courses. Weller (2000) outlines this technique as used in a technology literacy course taught online. Weller (2000) used the narrative of a history of technology not as the primary subject of the course, but rather as a framework for introducing and then exploring social issues surrounding technology, including its appropriate use. The narrative history formed

a “coherent structure” for learners to navigate the course, and offered “enculturation” in the absence of a shared classroom experience (Weller 2000, p. 3).

Czarniawska (2000) explores formal interpretive models for narrative in the context of organizational research and management practice. As described in Czarniawska (2000), narratives can be objects of not only teaching and learning, but also research and reflections by trained observers — who, in turn, offer insight back to the original participants.

Storytelling is also acknowledged as a marketing tool (Quesenberry & Coolson, 2014) as well as a strategy for leadership, staff development, and in the court system (Monarth 2014). As Monarth (2014) says, “Life happens in the narratives we tell one another. A story can go where quantitative analysis is denied admission: our hearts. Data can persuade people, but it doesn’t inspire them to act; to do that, you need to wrap your vision in a story that fires the imagination and stirs the soul” (p. 5).

Tappan and Brown (1989) explore the value of using narrative to understand moral development, not only moral instruction. As children tell stories about “mak[ing] a difficult choice or decision”, their parents, teachers, and researchers can see the evidence of their values and ethical decision-making. Tappan and Brown (1989) argue that moral development is an authoring process, that as individuals live their lives, they use their narrative capacities to learn moral lessons from their own stories. Finally, Tappan and Brown (1989) describe the functioning of narrative pedagogy in a moral education context as a process of inviting storytelling and engaging in the art and practice of interpretation (hermeneutics).

Narratives with educational and empathetic qualities are not limited to non-fiction — fictional accounts enable us not only to explore the world as it might be, or could have been, but also to explore moral issues and human truths through the insight of the author. *The Sociological*

*Review* blog published a series of essays on the role of fiction in sociology, exploring such topics as how fiction can help incorporate elements of stories that otherwise go untold (Iossifidis 2016), to make topics more accessible (Vallve 2016), and to explore the fictions of sociology itself (deCasanova 2016). Poets have passed history to us through the lens of myth, sages and elders have long used fairy tales to warn and entertain, while prophets and preachers use parables to instruct and guide. No comedian survives long without a few amusing anecdotes at the ready, and no course in leadership is complete without case studies and examples.

Fictional accounts allow certain truths to be told, from a subjective point of view – the perspective of the author, an engaging rendition of an event, perhaps less encumbered and less reinforced by references, classified information, or verifiable accuracy. This can lead to narratives that enrich historical or cultural understanding. The Little House book series by Laura Ingalls Wilder is an autobiography classed as fiction, but for American children, the series has brought to life the very real experiences of European settlers as they spread across the West. This account may also distort historical understanding. *The Birchbark House* series by Louise Erdrich offers a counter-narrative, not so widely read, of the experiences of native peoples as they watched the waves of settlers arriving. Regardless of the genre, the background and intentions of the author, or the subject matter, these multitudes of narrative examples share the theme of making ideas and information come to life through a storytelling arc, rather than the stating of propositional truths. However, narratives can also support false beliefs about such vital topics as science, history, and the nature of human relationships.

### **Disagreements and Concerns**

You don't know about me without you have read a book by the name of The Adventures of Tom Sawyer; but that ain't no matter. That book was made by Mr. Mark Twain, and he told the truth, mainly. There was things which he stretched, but mainly he told the truth.

— Mark Twain, *Huckleberry Finn*

As Huck Finn explains, not everything we read is true – and, in this case, Twain is breaking the typical pattern of narrative by addressing the reader directly, and distorting the tradition of encouraging a suspension of disbelief by having his fictional character telling us that part of his fictional story is true, and part of his fictional story is not true. There is an absurdity here, but also a substantial point to be made. Even in a narrative understood to be fictional, there are elements of truth or untruth – characters might ring true or seem more like cardboard; dialogue can leap from the page or feel hollow; locations might be richly evoked or shallowly mentioned. A well-constructed plot might still resonate with readers whether it is reasonable or fantastical, so long as it is self-consistent and carefully developed.

In fiction, a feeling of truth and an experiential quality often travel together, creating a sense of realness. The truth of a fictional tale comes in whether it contains the power to evoke a sense of reality for us, and perhaps whether it digs at deeper truths about our lives, giving us insight or greater perspective. The more evocative and transportative the tale, the more likely we are to believe it (Konnikova 2016).

In non-fiction, however, the notion of truth is perhaps less complex to describe, though perhaps no less difficult for an author to arrive at. There are many perspectives on the same story, and direct witnesses often give substantially different account of the same event. Memory misleads, trails to crucial details can go cold, and induction about what must have been can give way to supposition about what could have been. False memories can be implanted by an interrogation process, or simply through repetition of a story, until the subject begins to invent details on their own (Dunlosky & Metcalfe 2009, ch. 8). Recently, scandals have erupted around apparently false or exaggerated claims in the autobiographies of prominent figures such as

*American Sniper* subject Chris Kyle (Schmidle 2013), presidential candidate and pediatric neurosurgeon Ben Carson (Weigel & Fahrenthold 2015), anchorman Brian Williams (Podhoretz 2015), presidential candidate and Secretary of State Hillary Clinton (Harnden 2008), and bicyclist Lance Armstrong (Schrotenboer 2013).

In an autobiography, there is a perhaps understandable potential for authors to cast a positive light on their own story, to omit difficult topics, and to perhaps aggrandize oneself in hindsight. Wanting to have done something, or feeling as if something had occurred even when it had not, can create powerful memories. Some errors are absolutely intentional. The power of a compelling narrative can also be used to deceive.

The fact that narrative and narrative structures are situated at such a basic level of human cognition and behavior makes them not only powerful tools for personal and societal development, but also potentially harmful or destructive. Confidence artists and manipulators tap into not only such human weaknesses as greed and insecurity, but also the capacities that most often characterize successful societies — our generosity, trust, and openness. Although confidence artists are often characterized as playing on human greed, it is also their capacity to generate an appealing story that draws in unsuspecting victims (Zak 2012).

Konnikova (2015) describes a case of a young woman who concocted fraudulent stories of horrifying maltreatment as a way to receive both financial benefits and substantial personal attention. Investigators took months to unravel her case, but she was eventually found to have visited multiple countries under false pretenses. Her ability to play on people's sympathy has not only wasted time and money from a generous public and police force, but also resulted in her being barred from Ireland and jailed in Canada. In her native Australia, she had also committed fraud using emotional tales and playing on her youthful appearance to obtain help (Konnikova

2015). When a story appeals to emotion, reinforces biases, or seems too horrifying to be invented, the storyteller may be believed despite mounting contrary evidence (Dunlosky & Metcalfe 2009, ch. 8).

The risk of deception makes the study of narrative even more important. By exploring our own capacity to both create meaning and absorb meaning through stories, we build our capacity to think critically about the stories we hear. Correa et al. (2015) found that participants' willingness to donate to a charity in response to a crime incident was substantially manipulable not only by the emotional content of the overall narrative arc, but also by more subtle shifts in characterization: for example, the degree to which each character's backstory was aligned to individual values, and whether they were perceived to have behaved justly in unrelated actions preceding the incident.

As described in previously, building connections among pieces of information – even false or nonsensical connections – improves recall (Reisberg 2013) – but also opens the door for misunderstanding. One of the maxims we repeat to students and to ourselves in science is that Correlation is not Causality: just because two things occur together does not mean they have a causal relationship. The *post hoc ergo propter hoc* fallacy (these things occurred one after another, therefore the first caused the second) is a recurring challenge at all levels of education and society (Kahneman 2011). Inconvenient facts may be left aside because they “don't fit the narrative” — to the detriment of science, public policy, and justice (Kahneman 2011). The quest for explanations and interconnection can trigger the development of superstition rather than scientific understanding of a topic. Real stories may not fit together cleanly. We may not know why things happen. The world is full of random chance and meaningless coincidence.

Nehls (1995) speaks highly of the values of narrative pedagogy in developing critical thinking and personalized care for nurses, but also describes the potential for unscientific or fictional accounts as a substantial potential limitation. Alongside the drive for patient-centered care has also come a push towards evidence-based medicine; these two trends exist in some tension, as the desire to heed the patient's perspective about a course of treatment may not align with rigorously demonstrated outcomes. Patients with challenging diseases are often inundated with advice from well-meaning friends about alternative cures and the experiences of distant relatives – which can be distressing, overwhelming, and even dangerous (Bernhard 2015, Purdy 2014). As the maxim echoed so often in scientific circles exhorts us: “The plural of anecdote is not data.” (Dahlstrom 2014, p. 13618).

Other factors may complicate care that depends on narrative engagement. Some individuals may simply not want to participate in projects involving personal narratives. For example, in Clarke, Hanson, and Ross (2003), nursing home patients worked with staff to develop a “life book”. Some patients declined to participate due to their desire for personal privacy, or stopped partway through the project because of painful memories and difficult past experiences. In an educational context, instructors must consider the implications of assigning students to tell their stories, and consider alternate approaches to an assignment which might either result in revelations that violate a student's privacy and comfort within a class, or bring forth painful personal memories.

The use of narrative also carries with it a danger of over interpretation (Czarniawska 2000). The difference between a telling anecdote and an aberrant moment is slight, and the use of single examples to generalize broadly can lead to weak or misleading conclusions (Dahlstrom 2014; Kahneman 2011). Narrative formats can suggest coherence where there is none, or suggest

the wrong coherence —not only the logical fallacy but also the pat explanation, the too-tight and too convenient tying together of pieces and reasoning to lead to the end; this can be misleading and non-helpful (Kahneman 2011).

The very ubiquity of narrative may confound researchers, making the discernment of the direct impact of narrative modes of education into a difficult proposition. In Greenhalgh, Collard, & Begum (2005), health advocates took a narrative approach to diabetes education for their work with minority patients. The clinic adopted the approach of encouraging participants to tell and discuss their stories about disease management.

Although the program is summarized as a success, Greenhalgh, Collard and Begum (2005) found that while participants self-reported higher degrees of knowledge and confidence as a result of the program, the patients' outcomes (specifically measured through their glucose levels) did not improve in a statistically significant way — perhaps owing to the somewhat chaotic culture that developed within the storytelling groups. Members tended to come and go during a session, to attend erratically. During discussion, they tended to reject facilitation from educators and argued with one another vigorously, participating in the storytelling activities in ways more consistent with their own culture rather than adopting the approach the researchers were seeking (Greenhalgh, Collard, & Begum, 2005).

One objection to the narrative style of teaching is the fact that some fields and professions require that large amounts of knowledge be taught — but the question that should be asked is not whether these large volumes of information can really be taught using a narrative method instead of the current information, but rather, what needs to be remembered in a deep and essentially permanent way — and what is the most effective way for that information to be remembered?

As with any pedagogical decision, the question of narrative versus propositional instruction should be tested against both a measure of underlying effectiveness (whether or not learning takes place) and appropriateness (whether or not what is being learned is what is most important to be learned). And also, is the volume of information really being absorbed by any method, or is it merely being memorized through shallow associative networks — cramming — and then forgotten immediately after an exam (Reisberg 2013)?

If a core concept and facts must be learned, does it necessarily follow that the core concept and facts must be taught as such — directly and through dictation? Or might it be possible to learn those concepts in the same ways they were first learned and derived — through observation, experience, experiment, and personal flashes of insight? Addition might be explained, taught, and explored in any number of ways, but a lecture reciting an addition table is unlikely to be one of them. Methods and strategies are taught, and the specific facts that follow from those methods and strategies are part of exploring the core concept. Building numeracy is something like building a sense of the inner life and workings of the mathematical system — strategies for calculating correct results, yes, but also a deep sense of what kinds of answers make sense, what techniques can be used to derive them, and when a problem needs a new approach.

The same line of reasoning might be applied to more complex bodies of knowledge, such as human anatomy for medical students. Although students learn vocabulary and facts about the body's function, when it comes time to actually navigate the body surgically, or understand the workings of a drug or disease, a story must be formed in the mind of the person wielding the scalpel — about what connects to what, what relies upon what, what is interrupting or attacking what. Software tells a story too, of signals turned to actions, of objects whose nature is defined

with care and then let loose to interact with one another in ways we hope to predict before unleashing them on the public. So too must engineers navigate the complex systems of equations which describe and model a bridge in the wind under load, or the straining of continental plates or the braking of a school bus on an icy hill; the story of these objects, their nature, the forces they create and that act upon them must be told, completely and coherently, if we are to understand how they behave.

### **Conclusions**

After the Sputnik launch in 1959, fears about the level of science and mathematics education offered in American schools led to a re-evaluation of the assumptions made since the 1890s (Takaya 2013). In response, the Woods Hole conference brought together a range of educators and educational researchers. The book that arose from their discussion, written by Jerome Bruner, *The Process of Education*, became an international best seller (Takaya 2013). Bruner and his colleagues advocated for discovery education — a constructivist notion that encouraged teachers to facilitate classroom learning in ways that stimulated inquiry and independent thinking (Takaya 2013).

Later in his life, Bruner incorporated the concepts of narrative pedagogy into his thinking about discovery learning (Takaya 2013). The two main principles of narrative pedagogy (1 - the emphasis is on sense-making: constructing meaning from experiences, information, and ideas, which includes the student's own experiences and 2 - the teacher learns alongside the student with an open attitude, teaching in the way that we understand people to remember information best: in the form of stories which connect actors, actions, results, and implications) are closely correlated with the two main principles of discovery learning. As Takaya (2013) describes,

“Bruner also advanced a view that narrative thinking is a key method both for both inquiry development and identity development.” (p. 36)

Years later, the goals of discovery learning continue to echo through the advice of American curriculum advocates. The language of discovery and narrative learning is likewise incorporated into the Common Core, not only throughout the English Language Arts sections on Literature, Informational Text, and Writing, but also in the History/Social Studies and Science & Technical Subjects (Common Core 2016).

The National Science Teachers Association includes discovery and narrative principles in their “Principle 1”:

To provide quality science education for *all* students, NSTA recommends that science educators...model and emphasize the skills, attitudes, and values of scientific inquiry...help students reflect as learners and use skills of inquiry to become effective problem solvers [and]...structure and facilitate ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse. (2016)

The National Council of Teachers of Mathematics includes as core principles that:

Effective teaching of mathematics uses purposeful questions to assess and advance students’ reasoning and sense making about important mathematical ideas and relationships.... Effective teaching of mathematics facilitates discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments. (2016)

Despite this seeming consensus, rather than emphasizing inquiry, discovery, and reasoning, public schools are pushed into a dangerous cycle: mandates that they engage in frequent assessment through standardized multiple-choice exams which are used to measure student progress and teacher performance, regardless of what purpose the exams were designed to fulfill. In turn, this emphasis drives a reductive “teach to the test” curriculum and places an increasing emphasis on test-taking strategy, the formulation of answers according to a rigid and automatically graded rubric, and rote memorization, all done in the name of improving exam

scores. As a country, we must re-discover what we already know and understand: our abilities to think, learn, and remember are ultimately human in nature, built on textured associations of ideas, characters, and events.

Narratives are threaded through human history: it is partially through our stories that we know from where we have come. Narrative construction of knowledge about the world allows us to remember and reflect on the workings of the world. Our own narratives allow us to learn new lessons from our past. Entertainers, scholars, and scientists have long used the narrative form to communicate with an audience. By sharing our narratives with one another, we develop empathy, trust, and other social bonds. As social creatures, these constructs are necessary for our survival. The human propensity for narrative has been found to be useful in education, for such diverse disciplines as health, geography, and morality. Intentional use of this native strength allows educators to reach their students and students to teach themselves.

Narrative can also be misused – to manipulate and to distract us. In a courtroom, some scenario may “make a good story” – but not be true. Some scientific facts may not fit the current political narrative and thus be ignored, while dangerous untruths spread further. We cannot believe everything we see and hear, no matter how compelling the story. Thus our narrative construction skills must also be accompanied by narrative de-construction skills – the ability to take apart a story, and then to see the assumptions contained within it, the provable elements versus the interpretive, and weigh the significance of any unverifiable details.

The intentional use of narrative – to teach, learn, and understand – offers educators and learners a powerful tool. By aligning our teaching and learning methods with those mechanisms supported by human culture and biology, we open opportunities for ourselves and our students to

learn richly and deeply, to see their role in the world as well as the working of the world around them, and we give them the power to change their own story, if need be.

### **Future Directions**

The process of building this synthesis paper has allowed me to bring together my experiences in numerous courses in the Critical and Creative Thinking Program – especially Metacognition, Advanced Cognitive Psychology, Reflective Practice, Dialogue Processes, Action Research for Educational, Professional and Personal Change, and Processes for Research and Engagement. Each course has fed directly into the text of this document. The Critical Thinking, Creative Thinking, and Bioethics courses have each offered a series of case studies into diverse methods of instruction and learning, each intensive and challenging in their own way, offering me numerous examples to consider as I crafted my own perspective on education. This course of study has also challenged me to consider my next steps, personally and professionally.

Trying to listen for the voice of vocation, as Parker Palmer would say, always brings to mind an anecdote about my own identity. As a child, I very much wanted to be a CIA analyst. I wasn't necessarily clear at the time about what exactly such an analyst does, but the idea of being paid to analyze things sounded quite exciting. Just to think about problems, as hard as I could, and then to have those ideas wanted! To not to be teased for thinking and working hard! What a thrill that seemed! After reading everything my hometown library could tell me on the subject and attempting to practice tradecraft with a few of my friends, I realized that there was a fundamental flaw in my ambition. Working for the CIA would at times require me to lie, and I

knew, even then, that I would never be a good liar, no matter how much the public good might depend on it. Anyone looking me in the face would surely know my secret immediately.

Since then, I have found it very difficult to develop a concrete dream about my future – some people seemed to be born knowing exactly what they wanted to be, but not me. They pursued straightforward tracks, with rails already laid out in front of them. But every time someone has kindly attempted to lay out a railway for me, I’ve found it difficult to follow. All I can be certain of, and what seems most fundamental, is that I am drawn to environments that allow me the freedom to fully engage with topics on an intellectual level.

In pursuing graduate studies, I have increased both my skills and my qualifications for analyzing and engaging with topics that matter to me, especially the environments and communities we create to support learning, both virtual and physical. I have found the freedom to pursue topics according to my own areas of interest, sometimes learning established methods and structures for research, and sometimes following methods of my own devising or based on my own ambitions. My projects have engaged with educational institutions both formal and informal, and considered the needs of both adults and children. Along the way, I have learned that it is not enough simply to have good ideas and to put them into practice – one must also care deeply both about the problem and the answer.

The Critical and Creative Thinking program, with its encouragement that I take myself seriously, that I engage with both the subject and object of study, and that I practice reflection (not only analysis), has offered me the opportunity to fuse together perhaps disparate pieces of myself; to be analytical and human at the same time: a writer, a mother, a researcher, a wife, a student.

Having described myself as an ineffective liar, and therefore unsuited for espionage, perhaps it is somehow revealing or else ironic that my other vocation – besides analyst (or researcher, as I'd say now) – is that I am a writer. The way to a professional living as a writer may or may not open up before me, despite my efforts. But regardless of success, writing is part of who I am and what I do. From the time I was very young, I have been a continual writer. I would not say continuous, however – and the distinction between the two is perhaps not quite as broad as I'd like it to be, as I attempt to exploit the difference between them.

I say this because writing has been perhaps not so much a constant part of my life, as much as it has been the part of my life that I've never been able to get rid of, not for long, and not if I want to remain mentally healthy. As my interests have changed over the decades, I've put down my flute and French horn, stepped off the amateur dramatic stage, walked off the soccer field, ceased to practice Jujutsu, forgotten too much of the Spanish and Arabic I once knew. I might pick those activities up again, or I might not.

Like arts and sports and languages, writing is sometimes called a hobby. But none of these other supposed hobbies rear up and haunt me when I neglect them – except for writing. No other voice or interest demands my serious attention so much as writing does. And so, for my own health and happiness, I am a writer. I hope I also am welcomed by readers, but that road is less certain than even my own.

In exploring the power of narrative in history, culture, and education, I have also been reflecting on the power of narrative for me: not only as a reader and an analyst of teaching practices, but also as a writer of stories and a teller of tales. Even when my stories are classed as fiction on the shelf, it is my commitment that I somehow also make them as true as they can be, and to finally put not only my very best ideas into them, but also my heart.

As I proceed to the next stage in my journey of taking myself seriously, I will continue to expand my investigations into educational methods and narrative power, as a researcher, writer, and educator. In addition to pursuing education research and doing my own writing, I am cultivating writing and critical thinking in others. As I tell my stories, both as they were lived and as they have been invented, I hope to build both human understanding and critical reflection.

The mantra of “taking yourself seriously” has perhaps been over-emphasized in what I’ve written above, but the notion has been instrumental in guiding me through this two-year process. By my definition, *taking* is a matter of action: doing, not just believing – *yourself* is not only one’s lived experience but, most crucially for me, the entire self, not just the convenient and most external self – and *seriously* is a matter of bravery and pride: an ethical code which makes it incumbent on us that we reflect on our actions and ourselves, that we accept that our ideas have consequences, and that we make every effort to continuously free ourselves to live our best life.

## References

- “About”, (2016). Storycorps Website, <https://storycorps.org/about/>
- Acchiardo, C., Al-Bahrani, A. A., Holder, K., & Dirk, M., (2015), Through the Lens of Life: Teaching Principles of Economics with Humans of New York (December 21, 2015). Available at SSRN:<http://ssrn.com/abstract=2729251>
- Bernhard, T., (2015). 4 tips for dealing with unsolicited health advice. *Psychology Today*. July 2, 2015. <https://www.psychologytoday.com/blog/turning-straw-gold/201507/4-tips-dealing-unsolicited-health-advice>
- Clarke A., Hanson, E. J., & Ross, H., (2003). Seeing the person behind the patient: enhancing the care of older people using a biographical approach. *Journal of Clinical Nursing*, 12(5), 697-706.
- Common Core State Standards Initiative (2016) *Core Standards* <http://www.corestandards.org/>
- Correa, K. A., Stone, B. T., Stikic, M., Johnson, R. R., & Berka, C., (2015). Characterizing donation behavior from psychophysiological indices of narrative experience. *Frontiers in Neuroscience*, 9, 301. <http://doi.org/10.3389/fnins.2015.00301>
- Czarniawska, B., (2000). *The Uses of Narrative in Organization Research*. Gothenburg Research Institute Reports, nr 2000:5. <https://gupea.ub.gu.se/handle/2077/2997>
- Dahlstrom, M. F., (2014). Using narratives and storytelling to communicate science with nonexpert audiences. *The Science of Science Communication II Sackler Colloquium - Colloquium Paper - Social Sciences - Social Sciences: PNAS 2014 111 (Supplement 4)* 13614-13620; published ahead of print September 15, 2014, doi:10.1073/pnas.1320645111

- deCasanova, E. M., (2016). Liars, damn liars, and sociologists. *The Sociological Review*. April 1, 2016. <http://www.thesociologicalreview.com/blog/liars-damn-liars-and-sociologists.html>
- Dunlosky, J., & Metcalfe, J., (2009). *Metacognition*. Los Angeles: SAGE.
- Freytag, G., (1863/1895). *Technique of the Drama: An Exposition of Dramatic Composition and Art*, Elias J. MacEwan, trans., from the 6th German ed., Chicago: Griggs.
- Goyal, N., (2016). These politicians think your kids need high-stakes testing – but not theirs. *The Nation*. March 29, 2016. <http://www.thenation.com/article/these-politicians-think-your-kids-need-high-stakes-testing-but-not-theirs/>
- Greenhalgh, T., Collard, A., & Begum, N., (2005). Narrative based medicine: An action research project to develop group education and support for bilingual health advocates and elderly South Asian patients with diabetes. *Practical Diabetes International*, 22(4,) 125-129.
- Halonen, M., (2006). Life stories used as evidence for the diagnosis of addiction in group therapy. *Discourse Society*, 17(3), 283-298.
- Harnden, T., (2008). Hillary Clinton's Bosnia sniper story exposed. *The Telegraph*. March 25, 2008. <http://www.telegraph.co.uk/news/worldnews/1582795/Hillary-Clintons-Bosnia-sniper-story-exposed.html>
- Iossifidis, M., (2016). Uncertainty, Sociology and Fiction *The Sociological Review*. April 12, 2016. <http://www.thesociologicalreview.com/blog/uncertainty-sociology-and-fiction.html>
- Jivanda, T., (2013). Brain function 'boosted for days after reading a novel'. *The Independent*. December 28, 2013. <http://www.independent.co.uk/news/science/brain-function-boosted-for-days-after-reading-a-novel-9028302.html>
- Kahane, A., (2002). Changing the world by changing how we talk and listen. *Leader To Leader*. Fall 2002.

- Kahneman, D., (2011). *Thinking Fast and Slow*. New York: Farrar, Straus, and Giroux.
- Konnikova, M., (2015). How stories deceive. *The New Yorker*, December 29, 2015 electronic edition. Extracted from <http://www.newyorker.com/science/maria-konnikova/how-stories-deceive> on 4/9/2016
- Konnikova, M., (2016). The irresistible lure of the con artist. *New Scientist*, 229(3057), 38-41.
- McPartland, M., (1998). The use of narrative in geography teaching. *The Curriculum Journal*, 9(3), 341-355.
- McKeown, J., Clarke, A., Ingleton, C., Ryan, T., & Repper, J., (2010). The use of life story work with people with dementia to enhance person-centred care. *International Journal of Older People Nursing*, 5(2), 148-58. doi: 10.1111/j.1748-3743.2010.00219.x.
- Monarth, H., (2014). The irresistible power of storytelling as a strategic business tool. *Harvard Business Review*. March 11, 2014.  
<http://www.cobblearning.net/kellmarketing/files/2015/10/The-Irresistible-Power-of-Storytelling-as-a-Strategic-Business-Tool-29p4dfh.pdf>
- Lear, L., (2016) *Rachel Carson* website. <http://rachelcarson.org/>
- Lin, P., Grewal, N. S., Morin, C., Johnson, W.D., & Zak, P.J., (2013). Oxytocin Increases the Influence of Public Service Advertisements. *PLoS ONE* 8(2): e56934.  
doi:10.1371/journal.pone.0056934
- National Science Teachers Association. (2016). *Next Generation Science Standards*. Arlington, VA. <http://ngss.nsta.org/AccessStandardsByTopic.aspx>
- National Council of Teachers of Mathematics. (2016). *Principles to Actions Executive Summary*. Reston, VA.  
[http://www.nctm.org/uploadedFiles/Standards\\_and\\_Positions/PtAExecutiveSummary.pdf](http://www.nctm.org/uploadedFiles/Standards_and_Positions/PtAExecutiveSummary.pdf)

- Nehls, N., (1995). Narrative pedagogy: Rethinking nursing education. *Journal Of Nursing Education, 34*(5), 204-210.
- O'Neill, M., Haydon, A., & Simon, A., (2014). *Narrative Holes in STEM Storytelling: A Field Frame Analysis*. The FrameWorks Institute, Washington, DC.
- Palmer, P., (2000). *Letting Your Life Speak: Listening for the Voice of Vocation*. Jossey-Bass: San Francisco.
- Phillipson, N., (2010). *Adam Smith: An Enlightened Life*. Penguin: London.
- Purdy, C., (2014). 12 Things You Should Never Say to Someone with a Chronic Health Condition. *HealthLine*. February 28, 2014. <http://www.healthline.com/health-news/ms-12-things-not-to-say-022814>
- Podhoretz, J., (2015). Brian Williams had no reason to lie. *New York Post*. February 5, 2015. <http://nypost.com/2015/02/05/brian-williams-had-no-reason-to-lie/>
- Quesenberry, K. A., & Coolsen, M. K., (2014). What makes a Super Bowl ad super? Five-act dramatic form affects consumer Super Bowl advertising ratings. *Journal of Marketing Theory and Practice, 22*(4), 437-454.
- Ravitch, D. (2015). ESSA does not protect opt outs. Diana Ravitch's Blog. December 24, 2015 posting. <https://dianeravitch.net/2015/12/24/essa-does-not-protect-opt-outs/>
- Reisberg, D., (2013). *Cognition: Exploring the Science of the Mind*. 5th Edition. New York: W.W. Norton & Company
- Rossiter, M., (2002). Narrative and stories in adult teaching and learning. *Clearinghouse on Adult, Career, and Vocational Education, ERIC Digest, 241* <http://calpro-online.org/eric/docs/dig241.pdf>

- Schmidle, N., (2013). In the crosshairs. *The New Yorker*. June 3, 2013 edition.  
<http://www.newyorker.com/magazine/2013/06/03/in-the-crosshairs>
- Schrotenboer, B., (2013). Should Lance pay for doping lies in his autobiographies? *USA Today*.  
August 7, 2013. <http://www.usatoday.com/story/sports/cycling/2013/08/07/lance-armstrong-books-doping/2629895/>
- Shamay-Tsoory, S. G., Abu-Akel, A., Palgi, S., Sulieman, R., Fischer-Shofty, M., Levkovitz, Y., & Decety, J., (2013). Giving peace a chance: Oxytocin increases empathy to pain in the context of the Israeli–Palestinian conflict. *Psychoneuroendocrinology*, 38(12) 3139-3144,  
<http://dx.doi.org/10.1016/j.psyneuen.2013.09.015>.
- Smith, K. A., Douglas, T. C., & Cox, M. F. (2009) Supportive teaching and learning strategies in STEM education. *New Directions for Teaching and Learning*, 2009(117), 19-32.  
<http://dx.doi.org/10.1002/tl.341>
- Stanton, B., (2016). About. *Humans of New York*. <http://www.humansofnewyork.com/about>
- Thomson, K. S., (2000). Huxley, Wilberforce, and the Oxford Museum. *American Scientist*, 88(3). 210.
- Vallve, C., (2016). Telling stories to help understand what sociology is about. *The Sociological Review*. April 9, 2016. <http://www.thesociologicalreview.com/blog/telling-stories-to-help-understand-what-sociology-is-about.html>
- Weller, M., (2000). The use of narrative to provide a cohesive structure for a web based computing course. *Journal of Interactive Media in Education*, 2000(1).
- White, M., (1995). *Re-Authoring Lives: Interviews & Essays*. Dulwich Centre Publications, Adelaide, South Australia.

- Williams, J., (2011). STEM education: Proceed with caution. *Design and Technology Education: an International Journal*, 16(1), 26-35.
- Wills, T., & Day, M. R., (2008). Valuing the person's story: Use of life story books in a continuing care setting *Clinical Interventions in Aging*, 3(3), 547-552.
- Zak, P., (2012). *The Moral Molecule: The Source of Love and Prosperity*. Dutton: New York.
- Zak, P., (2015). Why inspiring stories make us react: The neuroscience of narrative. *Cerebrum*, 2015(2).
- Zumthor, P., & Peebles, C., (1994). The medieval travel narrative. *New Literary History*, 25(4), 809-824.