
Storytelling with Impact : A Neuroscientific Framework for Changing Attitudes and Behaviour

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ABSTRACT

This article synthesises a lecture by documentary filmmaker Cheryl Miller Houser on the power of storytelling to drive systemic change, particularly within the context of physical education and sustainability. The central thesis is that effective storytelling, grounded in neuroscientific principles, is the most powerful tool for shifting attitudes and behaviours. The article outlines a three-step framework for impactful storytelling: 1) Dream Big, which involves visualising a desired future to rewire the brain and align intention; 2) Make It Human, which focuses on creating empathy by featuring characters who express a universal range of emotions; and 3) Show Struggle and Triumph, which uses a classic narrative arc to create an immersive journey that empowers audiences to take action. The framework is illustrated with examples from sports (Serena Williams, Simone Biles) and social reform (a documentary on the US foster care system). The article explores the neuroscience of “narrative transportation,” the importance of deep listening in understanding an audience, and the ethical responsibility of the storyteller. It concludes by positioning storytelling as a “superpower” that must be wielded to counter narratives of despair, inspire hope, and mobilise collective action towards a more sustainable and equitable world.

INTRODUCTION

The challenge of creating large-scale systemic change, whether in public health, social justice, or environmental sustainability, is fundamentally a challenge of changing human attitudes and behaviour. While data, logic, and policy are essential components of any reform effort, they are often insufficient to overcome inertia, cynicism, and deeply ingrained beliefs. In an era marked by complex global crises, from climate change to social inequality, the need for more effective tools of persuasion and mobilisation has never been more urgent. It is in this context that the ancient art of storytelling is re-emerging as a critical, evidence-based discipline for driving social transformation.

This article synthesises a lecture by documentary filmmaker Cheryl Miller Houser, which presents a compelling case for storytelling as the most powerful instrument for changing hearts and minds. Drawing on insights from neuroscience and her extensive experience in filmmaking, Houser argues that well-crafted narratives are not mere entertainment; they can transport us into the story, fostering empathy, and inspiring action. The central thesis of her presentation is that by understanding and applying a core set of storytelling principles, leaders, educators, and advocates in any field can significantly amplify their impact.

The lecture deconstructs the mechanics of impactful storytelling, offering a practical, three-step framework that can be applied to diverse forms of communication, from conference presentations and academic papers to educational curricula and public advocacy campaigns. This article will explore each component of this framework, illustrating the concepts with the same powerful examples used in the presentation—from the worlds of elite sport and social reform. It will delve into the neuroscientific phenomena that underpin storytelling’s efficacy, such as “narrative transportation” and emotional mirroring. Furthermore, it will examine the ethical dimensions of this work, positioning storytelling as a “superpower” that carries with it a profound responsibility. For the physical education and sports community, grappling with how to promote sustainable practices and equitable systems, this framework offers a powerful roadmap for translating bold visions into collective, transformative action.

PRESENTATION HIGHLIGHTS

Cheryl Miller Houser’s lecture provided a masterclass in the art and science of storytelling for impact. It was structured around a clear, three-part framework, grounded in neuroscientific principles and illustrated with vivid case studies. The following sections synthesise the core concepts and examples presented.

2.1. THE NEUROSCIENCE OF STORYTELLING: NARRATIVE TRANSPORTATION

The presentation began by establishing the scientific basis for storytelling’s power. Houser introduced the concept of “narrative transportation,” a term coined by neuroscientists to describe the immersive experience of being lost in a story (Green et al., 2000). When a narrative is well-crafted, the brain does

not merely process information; it enters the world of the story and is transported through the people featured in the story. This phenomenon is driven by several key neural mechanisms:

- **Emotional Mirroring:** The brain’s mirror neuron system causes an observer to experience the same emotions as the characters in the story. Their joy becomes our joy; their struggle becomes our struggle.
- **Hormonal Changes:** Compelling narratives trigger the release of hormones that drive human connection. Oxytocin, the “trust hormone,” is released, fostering empathy and a sense of social bonding with the characters and, by extension, the storyteller’s message.
- **Cognitive Engagement:** Stories cause a spike in cortisol and adrenaline, which heightens attention and focus. This makes the information embedded within the narrative more memorable. As Houser noted, research suggests that the brain retains information significantly better more effectively when it is delivered within a story compared to a list of facts, and the impact on beliefs remains stronger over time (Mar et al, 2021).

This combination of emotional, chemical, and cognitive effects is what transforms a passive observer into an active participant, opening them up to new perspectives and making them more receptive to the message being conveyed.

2.2. STEP 1: DREAM BIG – THE POWER OF IMAGINATION

The first step in the framework, “Dream Big,” is about harnessing the power of imagination to create a clear and compelling vision of the desired future. Houser argued that the stories we tell ourselves and others fundamentally shape our reality. This is not a metaphorical statement but a neurological one. She cited the work of Dr. James Doty, a Stanford neurosurgeon, whose research has shown that the repeated act of vividly imagining a desired outcome and believing in that outcome can physically rewire the brain, creating new neural pathways that align our focus, energy, and intention towards achieving that outcome (Doty, 2016).

This principle was illustrated with a powerful example from the world of sport: a Nike advertisement featuring a nine-year-old Serena Williams and her father, Richard Williams. In the ad, Richard repeatedly tells his daughter, “Imagine you are at the US Open.” He was not just coaching her; he was co-creating a mental reality, a vision so powerful that it became an inevitability. By bringing Serena into his imagined world, he helped her to believe in it herself. Just seven years later, at the age of 16, she competed in her first US Open, and she won it the following year. The tagline, “It’s only crazy until you do it,” encapsulates the essence of this first step. Houser urged the audience to embrace this “crazy” thinking, to break free from the limitations of current reality and let their imaginations run wild. For those seeking to create systemic change, the journey must begin with a bold, audacious dream.

2.3. STEP 2: MAKE IT HUMAN – CREATING EMPATHY THROUGH UNIVERSAL EMOTION

Once a bold vision has been established, the second step, “Make It Human,” is to bring that vision to life through emotionally resonant characters. Houser’s central argument here is that lecturing people

with facts and figures does not change behaviour; it often does the opposite, triggering defensiveness. To open hearts and minds, one must “show, not tell.”

This was illustrated with a case study from Houser’s own work: a documentary film titled «Truth to Transformation», created for the New Jersey foster care system. The Commissioner, Christine Beyer, had a bold vision: to transform the system from one that removes children from their families to one that supports families to keep them together. To achieve this, she needed to change the attitudes of her 6,600 employees and build trust with the families they serve.

The film achieves this by focusing on the deeply personal stories of three individuals—Tamia, Dashaan, and Kayann—who grew up in the foster care system. By sharing their experiences, they tap into a range of universal human emotions:

- Tamia expresses a profound yearning for identity and belonging.
- Dashaan articulates a deep-seated need for safety and security.
- Kayann voices a powerful demand to be seen, heard, and respected.

Because these are feelings that every human being can relate to, the audience sees themselves in the characters. Their specific experiences of the foster care system become a vehicle for a universal human experience. This is the mechanism of empathy. As Houser stated, “Their experiences become our experiences.”

Achieving this level of emotional connection requires what Houser calls “deep listening.” Before telling a story, the storyteller must first understand the needs, fears, beliefs, and perspectives of their audience. The goal is to craft a narrative in which the audience feels seen, heard, and understood. A crucial element of this is to avoid positioning oneself as a “saviour.” Instead, the storyteller should turn the audience into the heroes of the story, showing them the vital role they can play in co-creating the envisioned future.

2.4. STEP 3: SHOW STRUGGLE AND TRIUMPH – THE NARRATIVE ARC OF ACTION

The final step in the framework, “Show Struggle and Triumph,” provides the narrative structure needed to grab and hold an audience’s attention and, ultimately, inspire them to act. Houser outlined the classic story arc that is most effective for driving change:

- 1 Goal & Stakes: The character has a clear goal, and there are high stakes if they fail.
- 2 Obstacles & Struggle: The character faces significant obstacles that they must struggle to overcome.
- 3 Transformation: Through the struggle, the character undergoes a profound internal transformation.
- 4 Triumph: The character achieves their goal, resulting in a triumphant resolution.

The bigger the goal, the higher the stakes, and the more intense the struggle, the more emotionally transported the audience will be. This was illustrated with another example from sports: a Powerade ad celebrating Simone Biles's return to the Olympics. Her goal was to compete again after her shocking withdrawal from the Tokyo Olympics. The stakes were her health, her career, and her legacy. The obstacles were immense: her physical injuries, the intense mental pressure, and the weight of public expectation. Her struggle was the arduous process of healing and rehabilitation. Her triumph was her victorious return to competition.

Houser stressed the critical importance of ending on triumph. When an audience witnesses a character they care about succeed after a difficult struggle, they feel a sense of vicarious victory. This feeling of empowerment is what converts the emotion generated by the story into the motivation for action.

This arc applies directly to the work of systemic change. To mobilise people, it is not enough to simply describe a problem. One must show the gravity of the current situation (the stakes) but also paint a vivid picture of the joy and relief of the solution (the triumph). Houser warned against the common trap of environmental and social-issue storytelling, which often gets stuck in a tone of “gloom and doom.” While it is necessary to be honest about the problems, focusing exclusively on the negative generates fear, anger, and shame, which ultimately leads to paralysis and a loss of hope. The key is to balance the struggle with a powerful vision of a triumphant outcome, giving the audience a sense of agency and a reason to believe that their actions matter.

CONCLUSION:

Cheryl Miller Houser's lecture provides a powerful and practical framework for anyone committed to driving systemic change. By grounding the art of storytelling in the science of the human brain, she demystifies the process of changing attitudes and behaviours, transforming it from an intuitive art into a strategic discipline. The three-step framework—Dream Big, Make It Human, and Show Struggle and Triumph—offers a clear and replicable methodology for crafting narratives that can move audiences from passive observation to active participation.

The presentation's core message is a call to embrace our role as storytellers. For the physical education and sports community, this means moving beyond simply promoting the benefits of activity or highlighting the problems of sustainability. It means dreaming big about the future of sport in a thriving and equitable world. It means telling human-centred stories that connect with universal emotions, whether it's the story of a single student overcoming a barrier to participation or a community transforming its environment to enable active lifestyles. And it means crafting narratives of struggle and triumph that acknowledge the immense challenges we face while simultaneously inspiring a sense of hope and agency.

Ultimately, Houser's lecture is a reminder that the stories we tell matter. They can either reinforce the status quo or they can create new realities. In a world saturated with narratives of division and despair, the choice to wield the “superpower” of storytelling for good is not just a strategic advantage; it is an

ethical imperative. By becoming more conscious and skilled storytellers, we can begin to write a new, more hopeful story for our planet and all who live on it.

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