Introduction and Scope

Humans are storytellers. We have, virtually forever, used stories to communicate, to pass on wisdom, and to spur imagination (Macdonald 1999; Hasse 2018). As long as people have spoken to each other, well before the advent of written language, storytelling served to pass down cultural, ethical, and other information from generation to generation. Even today, in a modern, largely literate era, oral communication is still arguably more important than written communication (Rosenberg 1987). There is evidence that humans may even learn better when (some) content is presented as a story rather than a lecture, for a variety of reasons (Herreid 2007). The rise in podcasts and other media that lend themselves to storytelling provides a new way for students to interact with course material (Robinson 2009), and may even be seen as a modern spin on the concept of learning via storytelling.

In order to discover the relevance and effectiveness of “storytelling” as a teaching method, this review will start with an example of a story the author tells in class. That story provides a concrete frame of reference to discuss what “storytelling” is and explain how it can be used in class. Neither storytelling nor pedagogy is limited to the classroom though, so the paper will conclude with a discussion of other situations in which storytelling might be useful. The source documents for this review were collected using a form of documentary “snowball sampling,” using both Google Scholar and library resources.

Throughout, I will attempt to distinguish between “storytelling” as a pedagogical technique and the social scientific concept of creating narratives. Though they are related, narrative creation is a process of sensemaking that is heavily influenced by a culture and that culture’s understanding of which stories are “good” (to be emulated) and “bad” (to be avoided) (Angus and McLeod 2004). In contrast, telling stories to weave together concepts and subject material does not require a value system, though it does not need to be apolitical either. Rather, it seeks to be engaging to the audience (the students) while communicating course content. To illustrate the difference, I will begin with an a story that I tell in order to communicate the structure of the atmosphere to the cadets I teach in an introductory physical geography class.

Brimstone and Bicycles—The Eruption of Mt. Tambora in 1815

It is often helpful to have a common touchstone to refer back to when speaking conceptually, so I will begin by providing a bit of background on my course and an example story to use to analyze pedagogical storytelling. I teach an introductory physical geography course that is organized around Student Performance Objectives (SPOs) and Key Terms (KTs), typically with 3-5 of each per lesson. The course, a part of
the mandatory curriculum, is known to cadets (and it must be said, some instructors) for being an example of “key term bingo”: understanding the material is not seen as a necessity for success. All a student needs to do is memorize and regurgitate key terms. That this is in part a story told by senior cadets to junior ones provides a small amount of amusement. In the past, graded events reinforced this perception though, often containing “gotchas” that were indifferent to understanding and rewarded rote memorization. Luckily, that is not the case as much anymore, though there is and always will be value in using correct terms. However, the perception of the course as one where cadets could economize their effort persists.

To avoid playing “key term bingo,” when I first began teaching I decided to create and tell stories as often as possible. An intentional part of this was to make my course more relevant in the cadets’ collective consciousness by showing the centrality of society and the physical landscape to our everyday world (Walker 2005). The overlap between the two is, I think, of critical importance to officership.

The first story I told using course material sought to explain the structure of the atmosphere through the 1815 eruption of Mt. Tambora in Indonesia, the resulting circulation of clouds of dust and ash around the world, and the major social changes linked to that in subsequent years. Such things resonate with my learning style, and, I hoped, with many of my cadets’ as well. The lesson is based on two sources: a profile of the inventor of the bicycle (Hamer 2005) is the primary source and the course textbook (Hess and Tasa 2016) provides the material around which to organize the lesson. This is a necessarily simplified story for a number of reasons—the need to remain close to the lesson material, the complexity and non-linear nature of societal change, and simple time constraints chief among them—but the story serves as place to begin inquiry (Gallagher 2011), to spur cadets’ to think, and to prime them for the idea that there is a great deal of complexity behind “the way things are.”

The story begins with the eruption of Mt. Tambora in Indonesia in April 1815. The massive eruption, said to have produced the loudest sound in recorded history, pumped 38 cubic miles of ash into the atmosphere over the next three months. The ash circulated around the world, resulting in the Year Without a Summer in 1816. This year of unseasonable cold and unpredictable precipitation, in turn, caused widespread crop failures, which were magnified in Europe by empty granaries. These had been pillaged by Napoleon’s armies when they retreated from Russia in the winter of 1812-13.

Together, the volcanically-induced climate change, the crop failures, and the empty granaries caused mass human starvation and unrest and resulted in the deaths of huge numbers of horses (Hamer 2005). Horses were of course an important method of transportation, and their widespread starvation spurred the invention of the bicycle. The bicycle provided relative freedom of association, particularly to women. This, combined with associated changes to social etiquette and dress codes, have at this point long been known as major contributing causes to the success of women’s suffrage in the United States (Aronson 1952). In simplistic summary, a volcanic eruption, an ostensibly physical phenomenon, ended up causing widespread social change nearly a century later.
Of course, for the story to be relevant, the cadets must understand the atmosphere’s structure and its influence on humanity. The sheer scale and devastating power of the volcano provides an immediate hook, drawing in the cadets’ attention. The ash, as it begins to circulate around the world, provides an opportunity to explain to cadets the directions of the prevailing winds. The vast quantities of ash also allow explanation of solar radiation and the greenhouse effect. In turn, this provides an opening for a brief (politically uncontroversial) foray into climate change, which takes the form of an explanation of how changes to the amount of particulates in the atmosphere in 1815 caused a “Year Without a Summer” in 1816. The devastating weather—snow in New York in June 1816, for example—provides cadets with a point of reference containing shock value. There is then a chance to enter briefly into military geography and operations, specifically logistics, as I explain a lesser-known consequence of Napoleon’s failed invasion: the empty granaries.

I have told this story, in longer form, to over 250 cadets, and after every single iteration, some cadet or group of cadets has told me that they were inspired by it and had no idea of the range of influence a physical process (the volcanic eruption) can have on humanity. At the end of the lesson, they have succeeded in learning the material and in many cases their expectations for an introductory physical geography course have been completely overturned.

What is a Story? Are Stories Effective in Pedagogy?

To understand why telling stories can assist in pedagogy, we must first define what a story is. At the simplest level, a story is a “sequence of two clauses which are temporally ordered” (Labov 1972). Of course, stories can be, and usually are, much more complex (more on that later), and there are many rhetorical devices that can be variously applied to the needs of the storyteller. Labov’s simple definition provides a key piece of information for an instructor: stories automatically impose a temporal logic on information: “first this happened, and then this.” In the case of the Mt. Tambora story, I inform the cadets at the start that we will be covering a century of nature-society interactions, all predicated on them understanding the atmosphere. By preparing them for the temporal scale and regularly updating them with key dates, the story furnishes the cadets with an expectation of an endpoint that keeps them focused.

Stories are not just a temporal sequence though. Ordering a series of events temporally is mere chronology, and is of little value to a teacher. This is especially true in higher education where one’s students should be operating in the upper reaches of Bloom’s Taxonomy (Carr 1986). Good stories offer not just temporal structure, but meaning—they make the listener care, and in doing so, focus on the content, with obvious beneficial implications for teachers. There is strong evidence that in largely oral cultures memory is extremely accurate because it is tied to emotion (Levy-Bruhl 1910, quoted in Abrahamsen 1998), and what is a classroom if not a largely oral culture? For example, referring to 1816 as the Year Without a Summer, stating that it was colder than usual, and that this cold was caused by the vast amounts of volcanic ash in the atmosphere is merely a two century-old fact. However, because the majority of the
audience had until very recently been conducting military training in New York in June, they immediately imagine their summer training (which usually takes place in merciless daytime heat) with snow.

In addition to raising student attention, a particular problem in large-enrollment, mandatory courses, stories can make lesson material more approachable and relatable. It is generally accepted that people perceive their lives as narratives in which they are the main character (Webster and Mertova 2007; MacIntyre 1981, quoted in Czarniawska 2004). This is constantly reinforced by the many different media of contemporary storytelling (movies, music, books, etc.) in which the consumer is encouraged to identify the main character. But by providing a context within which to learn (Herreid 2007), the pervasiveness and familiarity of stories in humanity may make it easier for students to relate to and therefore remember content presented via stories. Shifts in teaching techniques to emphasize participatory learning, and complementary shifts in the media available to conduct such practices, have further helped students enter into the experiences of others (Jenkins 2006; Robinson 2009). The (simplified) story of the success of women’s suffrage and the impact on it of something as seemingly unexceptional as the bicycle, which virtually everyone has used, allows cadets to imagine themselves changing the world using the simple tools at their disposal. That is a strong motivator for a group that is often at the Academy to try to change some small part of the world.

**Risks and Critiques of Telling Stories**

All qualitative methods, whether research or teaching, face critique from quantitative scholars because they lack numbers to “prove” their objectivity. Storytelling is often seen as scientifically unreliable: the effectiveness of anecdotes or qualitative research is often viewed less favorably than the quantitative scientific methods of the “hard” sciences (Hunter 1986). Though the effectiveness of storytelling as a teaching method can probably be measured through relatively simple experiments, that is beside the point. Certainly stories cannot be the sole method of instruction. Within the Mt. Tambora story, for instance, I regularly return to the (objective) lesson material to define key terms, show conceptual figures, and at one point require a few minutes of guided board work in groups. However, just because stories are not scientific in the peer-reviewed sense does not mean they are ineffective as teaching tools (Hensel and Rasco 1992). In fact, the very qualitative nature of storytelling may be an aid.

Effective storytelling does require substantial effort on the part of the instructor, for teaching is at its core a form of performance focused on communicating a specified sort of material (Luwisch 2006). Preparing a story requires far more effort than listing key terms via Powerpoint. An instructor wishing to tell a story must prepare for the “show” for hours, obviously learning the material, but also practicing timing, mannerisms, jokes, even movement in some cases in exactly the same fashion that a stage actor does. The instructor must even be over-prepared, because the performance is interactive, unlike on a stage (ibid): the instructor must be prepared to answer tangential questions (for the story itself is often an indirect approach to the course material) or need to backtrack to review while ensuring the audience does not lose the
thread of the story. Being aware of these stresses is central to the cognitive benefit of storytelling. By its very nature, the “performance” of teaching via stories results in mutual, interactive creation of the story by both the teacher and the student (Peck 1989).

**Storytelling Outside the Classroom**

Telling stories in classrooms, as I have shown, is likely to have beneficial impacts on student attention and material retention. However, classrooms are but one of many environments in which storytelling is a useful pedagogical tool. Professions, which tend to be closely associated with a relatively fixed set of values, are especially well-suited to sharing experiences as a means of teaching. There is, for example, a sufficiently large body of literature on storytelling in medicine to have warranted a recent edited volume (Robertson and Clegg 2016), and a strong thread of improving as an attorney through becoming a better storytelling (McKenzie 1992). Sharing anecdotes at a bedside or in a courtroom is obviously a far different process than traditional classroom teaching. However, at West Point, our role is to “educate, train and inspire” future Army officers. The mentorship strongly implied in that role extends to all subordinates, regardless of whether they are cadets or not. Most officers take this as a serious professional duty and responsibility, and therefore share stories in a way that provides a direct parallel to educating future doctors and lawyers. To explain why, I will illustrate some parallels between medicine and law on the one hand and officership on the other.

Medical and law are well known for specialized bodies of knowledge. Generally, this is peer-reviewed, and mostly gained through years of medical and law school. Mastery of this information is obviously a good thing—knowledgeable professionals evaluate the work of other professionals and therefore make the entire field better, then pass down that codified knowledge to the next generation of professionals. The Army also has its own body of standardized knowledge, known as doctrine. By modifying the definition of “joint doctrine” (“DoD Dictionary of Military and Associated Terms” 2018), we can arrive at a definition of Army doctrine: documents which outline the fundamental principles that guide the employment of the Army in coordinated action toward a common objective. In that sense, and in its use, it is analogous to medical science or published legal arguments because it provides a common foundation of knowledge, skills, values, and attributes (Hensel and Rasco 1992).

However, unlike medical science and legal opinions, doctrine is not peer-reviewed. It is also not wholly anecdotal either though. Rather, doctrine exists in a grey area between science and art. It is the collective, codified wisdom of the Army’s way of war. That wisdom is based, to an extent, on being generally replicable, but it may not be perfectly replicable as is science. There is no peer review of doctrine, because there are no peers in the same sense there are for scientists. Doctrine is a way of learning from others’ experiences (Davies 2017), of enabling readers—officers—to imagine themselves in a situation without having actually having been there. The Army even has a school system with instructors who teach doctrine, educating officers by allowing them to enter into situations in which they have little or no experience; in short, learning via storytelling.
Yet doctrine’s very codification, making it “real” in a sense by writing it down, fixes it in a way that is not wholly productive. Doctrine writing cannot keep pace with changes in tactics, techniques, procedures, and technology. It is the “right” or perhaps “approved” way to do things, but not necessarily the most effective. Doctrine is generally not wrong or outmoded, just slower to develop. Understanding it, though, is critical for balancing the “right” answer with the answer that works. The reason for this balance is to ensure officers do not become over-reliant on doctrine and therefore unable or unwilling to remain flexible and take the initiative. The gaps created as a result of the slow process of codification and the rapid pace of tactical evolution can only be filled by stories.

The partial embrace, or at least tacit acceptance, of personal and focused stories from senior members of the military to junior ones—“the way it’s really done” or “what I did in a similar situation”—is a way to provide a spur to junior officers to think for themselves, a critical competency for leader success. Some of this takes the form of career or leadership advice. Any officer can cite endless examples of received wisdom that were non-doctrinal and yet have proven to be critical to their success in some way. Often this advice is something people give offhandedly, and is therefore of dubious value. Other times though, it is well-considered and represents a useful contribution to the profession of arms. Other times, it is both. For instance, the advice to think of your “mission first, Soldiers always” is logically impossible (which is more important, mission or Soldiers?), and it seems like few of the people who say it realize that. Yet it promotes awareness of the fact that, while Soldiers are not disposable assets, their lives should be spent sparingly. Having said that, one’s mission is also important, and there is a balance to strike between the Soldiers’ lives and mission accomplishment. That is not an instruction that can be easily passed down via doctrine because the situations in which it could be applied are virtually infinite. It can only be transmitted through a story that cannot be congruent to the current situation, only similar. Any gaps created by this dissimilarity must be filled in by the listener, who brings his or her own value system to the discussion and must be allowed to make his or her own decision (Hensel and Rasco 1992).

On a larger scale, such advice or guidance is often called a “maxim” or a “truth.” Sun Tzu and Napoleon are oft-cited generators of military maxims. One of Napoleon’s famous maxims is to “march divided, fight concentrated.” This likely stems from Napoleon’s ability to move his corps on parallel roads and bring them together to fight battles. A critical piece of this was the logistical requirements on the armies of the time, which primarily ate by pillaging local crops. Too many soldiers on the same roads would result in the tail of the column slowly starving as it passed through a landscape emptied of food. In order to be prepared to properly tell that story, one must have learned both the logistical and the battlefield context in which Napoleon used it. If the storyteller is unprepared, the wrong lesson could get passed down, and a junior leader might separate his or her forces, unnecessarily because we no longer feed ourselves via pillage, only to see each of them destroyed in detail.
What these stories do, and why we need to tell them, is twofold. First, they indoctrinate future leaders into the language of our profession. Just as it would be a terrible thing to hear your lawyer ask who the person sitting behind the podium in the courtroom is, it would be terrible to hear an officer unable to speak of the importance of taking care of his or her Soldiers. Second, if well-told, the stories force the listener to make his or her own decision. Stories must be presented as neutrally as possible, taking care to present only the facts and the storyteller’s reflections on them. The precise situation will never be the same, and poorly applying maxims to inappropriate situations poses great risks to everyone involved.

Conclusion

Storytelling can be an important form of pedagogy. Stories impose, at a minimum, a temporal logic on the content of a course or lesson. That temporal logic offers students a metric by which to judge the progress of both the story and the lesson content, making them more engaged. Because humans are natural storytellers, we immediately pay attention to the structure of a story and often become subconsciously emotionally involved in the story. This emotional involvement aids in content retention, with obvious benefits to grades, class rank, and job prospects.

There are certainly risks and critiques of storytelling as a pedagogical method. Stories are not objective, because they have been lived by the storyteller (and often the listener has recently had a similar lived experience, spurring the story). This lack of objectivity should not be a barrier though. Because stories are told using emotion and elicit emotion from the listener, they often remain fresher in the mind of the listener than a peer-reviewed study or doctrine would. Telling pedagogical stories is not for the slipshod preparer though. The complexity and indirectness of stories means that the storyteller must be exceedingly well-prepared, even beyond the scope of the material, and able to rapidly adjust to the demands of the listeners and ensure they do not lose either the story or the content it is communicating.

Storytelling has a place in professional education, outside the classroom as well as inside it. Stories serve to fill the gaps left between the codified professional knowledge—peer-reviewed and doctrine—and rapidly-changing current circumstances or best practices. Not every circumstance of a professional’s education can be covered in codified material, so it is up to the senior members of that profession to share their knowledge in a non-directive, non-judgmental fashion to pass the knowledge down to the next generation.
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