

## Yes, No, Wait, What?: The Benefits of Student Mistakes in the Classroom

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THE QUESTION WAS QUITE SIMPLE. I had been talking in my United States history survey course about President Theodore Roosevelt's Progressive-era conservation agenda, and I was introducing students to his program for designating American natural monuments. "What was the largest natural monument in the United States?" I asked. Crickets. Some of their blank stares met my furrowed brow. My inner monologue preached, "*This is a participation-credit softball. You don't even need the readings to figure this one out.*" I showed mercy and offered them a generous hint: "It's so big you can see it from space." David's hand shot into the air, almost involuntarily.<sup>1</sup> This came as a surprise because David had rarely spoken in class—he had earlier confessed to feeling out of place as a non-major enrolled in a history course. But his reactive confidence propelled his answer before I could call on him. His response, however, sheepishly trailed because he realized mid-utterance that he could not shove the wrong answer back into his mouth: "The Great Wall...of...China." He slumped in feigned defeat, and a few of his classmates chuckled. I could not resist addressing his answer. "Well, David, it turns out that the Great Wall

of China is man-made...and it happens to still be in China.” David shook his head in agreement, the class laughed for a few seconds, and I went on to speak a bit about monuments.

While I was quick to move on with the lesson, I did not know what David experienced internally for the rest of the class session. I do know that he confronted a student’s greatest fear: being wrong in front of others. And he confronted that fear with great maturity, responsibility, and humor. More importantly, this experience seemed to change his behavior. Perhaps because he realized nothing “bad” happened to him after his incorrect response, he was much more confident about proffering answers to in-class questions. In fact, on one occasion, he prefaced his risky answer by recalling his “Great Wall moment.” With internal reservations apparently diffused, David improved as a scholarly contributor to classroom discussion.

This article explores what it means for history students to be “wrong” in the classroom, and the important role that error plays in teaching and learning. Student errors are nothing new to instructors. Nor do we often take much notice of them. Many of us have been scholar-teachers long enough that we accept the inevitability of being incorrect in front of others. But many students do not share our experience, wisdom, or scar tissue. Most do not yet know that it is acceptable to make errors in the classroom. This is can be difficult for history students to accept, especially those who cling to comforting beliefs in historical facts, master narratives, and perceived singular truths. This article aims to refresh teachers’ awareness of this real student fear. The essay also explores the benefits of students making mistakes in front of their peers and teachers. While I do not create a classroom environment that encourages students to be incorrect, I foster a culture of “intellectual amnesty” that helps them feel more at liberty to take risks, even with the specter of error looming. The final section of the article recommends exercises that reveal to students that history is a field of study open to multiple narratives, and less fraught with factual and interpretive mines ready to explode beneath them. These confidence-building exercises should also offer some transparency that history teachers are much more forgiving when students take risks in classroom discussion. Education journals show that teachers from pre-school to college are well ahead of history instructors in considering this issue. This is especially true

for teachers in the applied sciences such as math and physics, and in liberal arts such as English. This article hopes to bring historians into the pedagogical fold by acknowledging the importance and benefits of student mistakes.

### Understanding “Wrongness”

To appreciate the benefits of classroom mistakes, we have to find a common understanding of what it means to be wrong in history. For those readers who are already protesting that there is “no such thing as being wrong in history,” especially with the interpretative freedom we enjoy, allow me to cut them off at the pass. Book reviews, conference panel Q&As, and snarky hallway conversations assure us that wrongness can exist. Simply put, sometimes historians are looking for specific answers. In the context of teaching, we seek to measure students’ class preparation, reading proficiency, and their ability to incorporate lesson objectives. Admittedly, their rightness and wrongness is often based on the instructor’s interpretations and objectives. But students hardly see mistakes as measured only against a teacher’s expectations. Instead, for many students, being wrong is personal—a reflection of their failures, their poor preparation, and their errors. Some even internalize error as a shortcoming in their own intelligence.

Beyond the standards we set for students, our culture is laden with claims to universal historical truths and assertions of right and wrong. See the enduring and unnecessary divide between high school and college history teachers, especially reinforced by popular books like James Loewen’s *Lies My Teacher Told Me: Everything Your American History Textbook Got Wrong*.<sup>2</sup> We also need look no further than the desperate compulsion of junior scholars to debunk established findings to elbow their way into the profession. Finally, myopic and arrogant finger wagging on nightly news panels warn viewers about the dangers of “revisionist” historians and what they have done to destroy the “real” past. Whether we agree with or reject these universal premises, it matters not to students who are first exposed to the joys of history through these polarizing forces.

In my effort to define error in the history classroom, I will not pretend to be a philosopher or psychologist, and comprehensively explore the many permutations of wrongness. Instead, this article

leans heavily on Kathryn Schulz's *Being Wrong: Adventures in the Margin of Error*, a book that inspired this article.<sup>3</sup> Schulz offers two simple definitions in her examination of "wrongology": it is a "deviation from external reality" as well as an "internal upheaval in what we believe."<sup>4</sup> This definition positions wrongness as an intellectual phenomenon: it challenges what we think we know. But that alone is insufficient to understanding wrongness. In dramatic fashion, Schulz argues that wrongness is also an experience that challenges who we think we are. Because we tie our knowledge to our self-awareness, coming to the realization that we were wrong—if we realize it at all—may force us to reassess how capable we are of effectively comprehending and managing ourselves and the world around us.<sup>5</sup>

Before we question the futility of all existence, we should pull back and consider the usefulness of mistakes. To put wrongness into perspective and make it more manageable, Schulz offers two models. The first is a pessimistic model of wrongness: "it is dangerous, humiliating, distasteful, and, all told, un-fun in the extreme."<sup>6</sup> Errors of this sort are disturbing because the pain tends to outweigh the damage actually caused by the error. Worse yet, such concentration on its negativity can obscure the cause of the mistake in the first place. On the other hand, we might enjoy an optimistic model of wrongness, which is marked by "[s]urprise, bafflement, fascination, excitement, hilarity, delight."<sup>7</sup> This type of wrongness is not as easy to see, in part because the default is to assume the fear and shame of wrongness. To maximize the potential benefits of classroom mistakes, we should emphasize this optimistic model. Teachers need to steer students away from the humiliation of error and positively reinforce the enriching opportunities that come from them.

Student classroom mistakes can be difficult to define because understandings of error might differ depending on the customs and expectations of students, teachers, schools, and even cultures. Surely, anytime a teacher rightly identifies a student's error, we could count that as a mistake.<sup>8</sup> But such a one-sided, result-oriented definition does not fully consider a student's role and experiential feelings in instances of wrongness. Looking more specifically at the history classroom, there are two types of mistakes that students typically make: perceptive and preparatory. *Perceptive* mistakes indicate

wrongness in the ways in which a student has come to understand or interpret course instructions or content. Students might offer answers that illogically or unreasonably deviate from the available evidence. Likewise, their fear of improperly interpreting the evidence might induce their silence. In cases of perceptive wrongness, teachers should get students to worry less about finding “correct” interpretations, and focus more on the processes of coming to various interpretations. How can or will students best use the evidence to create probing analyses and appropriate conclusions? *Preparatory* mistakes, the second type, are much more common. Such errors suggest that students insufficiently studied for assigned lessons, or at best case, struggled to recall what they did prepare. Here, the focus is less on what paths they took to devise their analytical answers. Instead, instructors can concentrate on fundamental study habits. Have they read the materials? How did they reinforce their readings—outlines, notes, hopeful memorization?<sup>9</sup>

Experience assures us that mistakes will happen. So then why do we fear them? More specifically, why might so many of our students fear them? Understanding this fear is essential to getting students to shift from pessimistic to optimistic models of wrongness. Part of the fear lies in the contrast between right and wrong. Certainty is alluring because it affirms our understandings of the world and that our knowledge and decisions will help us master whatever the world throws at us.<sup>10</sup> Plus, being right simply feels good. In contrast, being wrong challenges our perceived mastery of our surroundings, as well our mastery of life’s small and big decisions. Doubt can send us into what Schulz calls an “emotional agoraphobia,” where we are left “stranded in a universe that is too big, too open, and too ill-defined.”<sup>11</sup> Beyond our own personal feelings, cultural characterizations of error and morality have linked right with righteousness, and wrong with dangerous and manipulative evil. The internal and external pressures of wrongness can weigh heavily on all of us.<sup>12</sup>

Concerns over wrongness might be even more heightened with college students, especially the youngest. Experimenting with their newfound adulthood and freedom, many of them are at the intersection of adolescent “know-it-all”-ism and youthful adult wisdom. They enjoy a better sense of what they do and do not know, and how they might acquire useful knowledge. Thus, wrongness threatens their sense of independence and agency. When teachers

point out their errors, such corrections might be jarring to young students' confidence and to their nascent sense of adult mastery.

One factor helps explain students' hypersensitivity to error: the American tradition of privacy protection. Even in an age when people broadcast their intimate thoughts and mundane observations across all manner of social media, Americans still jealously guard against uninvited intrusions in their personal spaces. Knowingly or not, students extend that privacy to their own school work. Institutional policies aligned with FERPA reinforce that expectation. Our penchant for written assignments and our diplomacy in shielding grades and ID numbers also underscore privacy's importance.<sup>13</sup> This is even more emphasized in liberal arts fields like history, where we place heavy emphasis on individual, non-collaborative work. Not surprisingly, the shadow of privacy creeps into class discussions. Professors regularly balance their desire to elicit good participation with the mental gymnastics required in not revealing students' inadequate preparation and knowledge. One unfortunate repercussion of this privacy tradition is that students are not used to hearing that they are wrong, even when they are.

Students in other countries do not share this expectation in privacy. Separate studies of Italian and Chinese students reveal that their teachers do not shield students' privacy. Instead, instructors have much more open discussions about performance, marks, and mistakes. Scholars note that this seems to diminish the sense of shame that students feel when they err. There, instructors shift their focus from the mistakes and their makers, to the mistakes and their solutions. Students feel less embarrassed because they have a clearer understanding that failure can breed success. Compare this to an American education culture steeped in privacy, which creates an expectation of a non-invasive workspace. Thus, students are not used to public exposure of their work, even when it is excellent. The American respect for privacy clearly changes the way instructors address errors. We spend more time tiptoeing around the embarrassment of error, while teachers in more open cultures are comfortable asking students follow-up questions about their mistakes.<sup>14</sup>

In addition to privacy concerns, the historian's commitment to objectivity make questions of right and wrong even more pertinent. Schulz argues that wrongness is intricately tied to objectivity.

Historical research aims to reveal past “truths.” But to do that, we would love to be able to “see if we could somehow access the world without the involvement of our brain...without distortion by personal feelings, prejudices, or interpretations.”<sup>15</sup> Such detachment from “the self” is difficult as we consciously and unconsciously see the world through personal-, social-, and class-based lenses, as we cling to senses of “dogma and ’isms,” and as we worry about how our beliefs and actions align with public opinion.<sup>16</sup> It makes sense from the historians’ vantage. We want so much to be correct that we strive to remove ourselves from the analysis as much as possible. But as Schulz points out, as if she has historians in mind, the possibility of being wrong threatens perceptions of what is real. Or better put, “[t]he experience of realizing that we were wrong represents the frustration of this desire—the revelation that the self was there all along.”<sup>17</sup> Nevertheless, she tries to calm her readers, reassuring them that making mistakes in the quest for objectivity should positively reaffirm how valuable their brains are in research and writing processes.

So what does the problem of objectivity have to do with our students? Few fields exceed history’s high expectations for achieving objectivity. Yet historians—with their patience in searching for evidence and balancing competing viewpoints—are best prepared to know that absolute objectivity is impossible to achieve.<sup>18</sup> It likely explains why history books and articles take so long to produce, and why history Ph.D.s take longer than other disciplines.<sup>19</sup> Historians’ expectations of the impossible-to-achieve are unrealistically high. Thus, we need to model better behavior to students, and assure them that historical errors are not fatal. In fact, they can lead to healthy, organic, and realistic discussions about the past.

Once we understand error and why we fear it, we still have to push students over a final hurdle: embracing wrongness’s inevitability. To presume that we can eliminate any real errors would require the ability to distinguish between fact and errors consistently, a herculean feat in an interpretative science like history. Nor can the struggle to eradicate mistakes ever fully account for unintended or unanticipated influences and consequences. Simply put, we cannot plan for all variables, no matter how hard we try. The only way truly to shield from the pain of mistake is to hide from those potential sources of error, and thus isolate ourselves from the human experiences

that foster social, cultural, and intellectual development. To avoid mistakes is to avoid enriching opportunities. Lastly, such attempts to curb mistakes can detrimentally stifle curiosity, creativity, ambition, and reasonable effort. To be clear, I do not ask my students to wave the white flag and surrender fully to error's inevitability. I still want them to prepare as agents in their own learning as best they can. I just remind them that error is a part of life and a part of study, and that they should not paralyze themselves in pursuit of perfection. Instead, they should incorporate the possibility of making mistakes that might be beneficial to their learning experiences.<sup>20</sup>

### **Purposeful Errors: The Benefits of Student Mistakes in the Classroom**

If teachers reassure students that mistakes are both typical and inevitable, they must also assure them that there is a place for student mistakes in history classrooms. In my courses, my plan for "intellectual amnesty" creates a liberating environment for fuller student participation.<sup>21</sup> I want my students to know that they are allowed to be wrong in class, as long as their errors are grounded in serious and purposeful preparation. While I expect my students to prepare everything that I assign, I do not expect them to master everything before them. I steer them toward productive effort, not perfection. Above everything, I want them to communicate freely and productively because that is the most basic skill they will take with them to the outside world. Reducing the fear of pessimistic wrongness will bolster their courage to take risks, including small ones in the classroom, or large ones beyond the academe.

There are many ways that instructors can set the tone for intellectual amnesty in their courses. They can have an open announcement and discussion, they can put disclaimers in their syllabi, and they can take one student's mistake as an impromptu opportunity to explore the importance of errors. Regardless, we need to communicate class expectations for preparation, the limitations of perfection, and the beneficial (and, perhaps, the negative) consequences of classroom errors. The remainder of this section explores the key benefits that can come from student mistakes. Teachers can share them with their students, or keep them for themselves to experiment in strengthening their own teaching strategies.

## 1. *Generating New Paths of Learning*

The most obvious benefit that comes from students being wrong in the classroom is the unforeseen or unplanned paths of learning. For centuries, scientists have relied on good mistakes for further discovery. After all, the scientific method stands as an enduring testament to the usefulness of mistakes.<sup>22</sup> Education scholars repeatedly refer to these opportunistic mistakes as “springboards of inquiry.”<sup>23</sup> As teachers, we strive to create lessons with *our* concrete objectives in mind. However, a well-intentioned error might take discussions into unintended dialogues. For several reasons, we should be open to taking lessons down unknown but productive paths, even if initiated by student mistakes. First, it gives students more stake and more control in their learning experiences. When students break from the teacher’s “script,” it can give them a sense of empowerment—and possible confidence—for taking part in shaping the course’s objectives and outcomes. They become fuller agents in their own learning. Second, these springboards of inquiry can reframe understandings of the lessons we intend. As Schulz points out, “[o]ur mistakes, when we face up to them, show us both the world and the self from previously unseen angles, and remind us to care about perspectives other than our own.”<sup>24</sup> Burdened by institutional demands and pressed for time in the classroom, we sometimes fixate on the planned classroom aims, locking in too rigidly on our own missions. But errors can offer windows to other perspectives that the student might find more relatable. Third, the bravery to be wrong can summon collegial rewards. If one student has made a mistake, it is likely that others might have shared that same uncertainty. Thus, one student’s error can lead to another student’s clarity. Finally, the link between a student’s error and the new path of learning might be a simple awareness of how much the student might not know. Math teachers have noted that the freedom to make errors can boost self-esteem and the confidence to seek more specific explanations from their instructors and peers.<sup>25</sup>

Teachers must be careful, however, to promote these new paths of learning by way of good preparation. I am loath to entertain divergent conversations if they are born from flippant comments, charmed curiosities, or uneducated guesses. Above everything, I am afraid of validating inadequate performance and preparation by

taking those ill-begotten springboards. Instead, we should encourage students to make “good mistakes” based on solid preparation for two key reasons. First, it should promote more faithful study practices. Secondly, if students have prepared well, they will be in a better position to either correct their mistakes or contribute to the discussion’s meaningfulness if it stems from a springboard leap. Even if the new learning path does not fully align with the teaching lesson, rewarding prepared students with a divergent discussion furthers the mission to sharpen their critical thinking skills.<sup>26</sup>

## *2. Minimizing Future Mistakes*

A benefit from students experiencing wrongness in the classroom is that it can work to reduce their future mistakes. Even if students have accepted that erring is part of life and learning, they do not have to accept that mistakes are unavoidable in all circumstances. When students make errors, sometimes teachers have the open opportunity to explore their paths to wrongness. It might be as easy as saying, “That’s an interesting answer I hadn’t considered. How did you come to it?” This could lead to two possible outcomes. It might uncover the students’ failure to prepare adequately or their struggle to understand the course materials. But it might also lead to another springboard of inquiry. For example, despite my valiant efforts to the contrary, my students often believe the United States went to war with Germany and Japan in World War II because they were communist countries. While their misconception shows that they were not reading or listening closely enough, it gives pause to explore meanings of communism or wartime governmental-economic systems in Axis countries.

Schulz offers three keys ways to reduce instances of error, all of which teachers and students can adopt in their own practices.<sup>27</sup> The first is to switch from talking to listening. If we listen to each other more, it reduces opportunities to be wrong, and the related need to defend ourselves so often. Listening can also work to build stronger bonds of communication and collegiality. It tells friends, classmates, and colleagues that we are interested in what they have to say. The second key is transparency, to quash any tendencies toward silence or secrecy. This is especially important as teachers, because we need to create an environment where most thoughts in

the laboratory of ideas are welcome. Finally, we need to elevate expectations of participation. Schulz insists that we must “permit and encourage everyone, not just a powerful inner circle, to speak up when they see the potential for error.”<sup>28</sup> For the classroom, that means turning to the less vocal students to let them know that they are vital partners in the learning experience. This blueprint offers ways to reduce chances of making mistakes. But it also serves a greater purpose. These are key factors in developing effective citizenship in a functional democracy, as well as firm understandings of the fluid meanings and responsibilities associated with citizenship.<sup>29</sup> This is especially important at a time when liberal arts and humanities programs compete with STEM-based agendas for institutional funding and attention. If we can instill these ideals in students to help them reduce personal mistakes, we can also develop better-rounded citizens who will link their educational experiences to outside excellence.

### 3. *Finding Pleasure*

A surprising benefit that comes from in-class errors is the joy that can accompany them. Much of that pleasure is found in the wide gap between the unrealistic demands we place on ourselves to always be right and the realities of how difficult it is to meet those demands. The source of this pleasure is open to debate, though. Some might enjoy others’ errors as a matter of self-satisfaction, that one person’s failure reaffirms another’s ability to master “rightness” better. Put in other words, “*Well I’m glad I’m not like that fool.*” This explanation, however, seems a bit too callous for the undergraduate classroom. There, students best manage their insecurities with good preparation or silence. Instead, Schulz suggests a more “generous” explanation for the pleasure in witnessing other people’s errors: it elicits “self-recognition.” It reminds us that we are all prone to similar mistakes. This fits much better with less-competitive liberal arts classrooms, where doing better than others brings few comparative advantages. More specifically, it fits well in history because our mistakes tend to be generally harmless, unlike those in many of the hard sciences.<sup>30</sup>

Scholars caution that teachers must handle this pleasure in wrongness appropriately, proportionately, and sensitively, to avoid potentially negative consequences. If laughter leads to what students

might take as ridicule, the effects on their learning could leave long-term scars. Writing about pre-college students, Maria Tulis outlines several deleterious effects that come from mishandling students' errors, many of which would apply to college student experiences. These effects include heightened fears of failure, avoidance of challenging courses, reinforced disdain for related school subjects, reluctance to take academic risks (especially in the classroom), and the increased likelihood that students might try to hide their mistakes instead of seeking clarifications.<sup>31</sup>

While awareness of these unwanted consequences is important, humor has much more disarming, leveling, humbling, and most importantly, comforting effects than many might admit. Accompanying errors with pleasure and laughter can offer students a healthy diversion. A professional playfulness can relax tensions, and create a more collegial atmosphere for content exploration.<sup>32</sup> Laughter can also help us move forward from the mistake, instead of dwelling on the pain that can come from it.<sup>33</sup> One study of middle-school students—arguably more sensitive than typical college students—showed that the sting of wrongness was fleeting. When interviewed a year later, only a few of them even remembered making mistakes in front of their peers.<sup>34</sup> In short, most students do not hold on to the pain of their mistakes, and humor might be the anodyne.

If handled properly, humorous moments can also offer springboards for inquiry. Teaching a serious lesson on Aaron Burr and his trial for allegedly treasonous activities, I took a moment to explore the role of the vice presidency in United States history. When I offered Dick Cheney as a counter-example to the traditionally powerless vice president, a student interjected “Yeah, didn’t he shoot Dan Quayle in the face?” I assured him that he was incorrect, that Cheney had accidentally shot a hunting buddy. But the student insisted that he was right. He was so confident in his error, I allowed him to take out his phone and look it up. While he was researching, another student chimed in, “Uh, he was hunting for quail, not for Dan Quayle.” It got a good laugh, and he graciously admitted his error. This moment did not hinder him from contributing in the future. More importantly, it gave us a springboard to explore unintended, but still important issues: varied understandings of the vice president’s role, the significance

of the vice president's public image, and (sadly, for some students' benefit) who the hell Dan Quayle is.

#### *4. Cultivating Compassion*

There are vast differences in the ways new college students and seasoned students can view the classroom. In my introductory courses, I see the students' discomfort when one of their classmates gives an obviously incorrect answer: squirming, smirking, huffing disapproval. In my upper-level classes, however, I see fewer reactions. Part of that likely comes from the fact that most students have experienced being wrong and know that little harm comes from it. In a sense, this shows a developed compassion, which Schulz argues is one of the most powerful byproducts of experiencing wrongness. An insistence on being right all of the time turns people toward petty competitiveness, often at the expense of their colleagues. In contrast, being wrong is not only humbling, but it can trigger empathy for others that might fall into similar situations.<sup>35</sup>

One way I foster this compassion is to allow students to seek help from their colleagues. If students make a mistake in class, my first response is to give them a chance to correct it, or explore why or how they came to that answer. If they struggle to manage their answer, I offer them an out by asking if they would like to "yield the floor" to a colleague who might be willing to help. This approach gives students the agency to make amends if they can or want. But it also creates opportunities for other students to show compassion by rescuing their colleagues. Here, "mistaken" students are still empowered to ask for help on their own terms. This leaves them with two productive options: answer the question appropriately or build a brief connective learning experience with their colleagues. Note that in either choice, "mistaken" students are not failing—they are learning. As for the "helping" students, this approach creates an environment where they demonstrate compassion without "showing up" the first student. This is not a unique approach, but viewed through a compassionate lens, it shows that what teachers do is much more important than eliciting good answers. It builds a collegial and supportive setting for the instructor and student peers, and models compassionate practices that they can use outside of the classroom.

### 5. *Managing Mistakes Beyond the Classroom*

A final benefit for students in making classroom mistakes is that they should be better able to manage their errors in less forgiving environments, like the workplace, the home, or in their everyday personal relationships. If practice makes perfect—or at a minimum, a lot better—then the safe confines of the classroom provide students with opportunities to make and correct their own errors with little negative consequence. The same cannot be said for the outside world, where errors in their most drastic results can end careers, companies, friendships, marriages, and lives. Hearing their teachers tell them they are wrong, especially in front of their peers, can help season students for the realities of error in the outside world. If we can teach students how to manage their basic mistakes in the classroom, we can help them separate pride from knowledge. At the heart of any success and mistake is our own sense of pride, and our desire to protect it. We find satisfaction in being right, and too often find shame in being wrong. And being wrong should bring optimism, not shame. Students should see mistakes not as their failures, but as revelations that they are not correct *yet*. They should shed the self-imposed pain of mistakes and chase better solutions. This is easier to do in the comfort of the classroom. So practice should translate to better management of mistakes beyond the classroom. If students understand that erring is a simple condition of human interaction, they might not stubbornly cling to caustic beliefs. Instead, they should learn to be quicker in making corrections without the fear of wrongness's lingering sting. The pain of being wrong will never be as severe as the pain of not addressing mistakes promptly and appropriately.<sup>36</sup>

Student mistakes do not only help their owners. They can also offer unforeseen benefits to instructors. As vehicles for formative assessment, errors can give teachers a better sense of their students' knowledge, class personalities and biases, the inadequacies of their assignments, and perhaps their own communication abilities. When student mistakes reveal the limits of student understanding, the teaching focus might need to shift from right and wrong answers to analyzing students' learning paths. Instead of examining what students know, classroom errors should give pause to figuring out how they learned what they thought they knew. "*Was it something I*

*said? Was it how I said it?"* Teachers might think they have designed their lessons with great clarity, but they cannot fully control the way students understand them. A student's "mistaken" answer might be a teacher's mistake altogether.<sup>37</sup>

We have to be especially attuned to these "errors-as-teaching-signals" because our own hiccups are not readily noticeable in the classroom. Many students take the "knowledge" we teach—and the ways we teach it—as gospel. Therefore, they do not always think to question our teachings, or perhaps are not brave enough to dare. And we cannot blame students for not highlighting an instructor's deficiencies. Students put great trust in our teachings for two reasons. One, it is more efficient to trust than it is for them to recreate a lesson from whole cloth. As Schulz notes, relying on our leaders' knowledge bases and experiences is like benefitting from "many billions of prosthetic brains."<sup>38</sup> As this examination of mistakes has suggested, reliance on individual perceptions is not necessarily more reliable than secondhand information. Also, putting faith in teachers can help students feel certain in their own learning. This faith encourages most students to embrace instructor correctness as a presumptive default. Thus, we need to be hypersensitive to student mistakes as barometers of teaching effectiveness. If students make repeated or regular errors, teachers should take a moment to examine what they might have done to create an environment for such errors, whether it is a fault in their assignments, their lessons, or their efforts to communicate in the classroom.<sup>39</sup>

### **Comforting the Afflicted: Exercises in Managing Wrongness**

To foster a fruitful culture of intellectual amnesty, it would help to offer exercises that train students to manage perceptive and preparatory mistakes. The goal is not simply to end mistakes. Students need to be aware of a historical world where mistakes exist. Here, we shift students from the negative embarrassment of wrongness to an optimistic sense that promotes student growth from instances of error. Much of "learning from mistakes" does not come from telling students they are wrong. Instead, the best enrichment comes from the safe space where students ask questions about errors or conflicting interpretations, and explore various paths to correct, reconcile, or account for such deviations.<sup>40</sup> This section recommends

exercises to sharpen the students' skills in managing the realities of perceptive and preparatory errors involving other people's sources. It also suggests a third type of error management, one that addresses wrongness allegations between historians themselves.

### *1. Managing Perceptive Errors with The Alamo*

Because some students put their faith in master narratives and singular truths, they often shy from participating in class if they do not have a firm grasp on what they believe are universally correct answers. But as experienced historians, we know that most good "answers" are born from the art of interpretation. This exercise aims to educate or remind students that history is an analytical science. The past is open to interpretation, in great part because it is the product of varied perspectives.

An exercise showing perceptive differences asks students to explore primary sources recalling the Mexican assault on Texan rebels at The Alamo in 1836 (**Appendix A**). While the tale is often told as part of larger narratives on American westward expansion and Mexican independence, students should explore raw sources that make up that tale. In particular, they should look at evidence from three perspectives: the rebels seeking Texan independence, the Mexicans working to preserve the Republic, and the American newspapers recalling the assault. They can use these sources to explore basic questions: why did the battle take place; why did the rebels lose; how did Texans, Mexicans, and Americans see the battle and its importance differently? The Texas State Library and Archives Commission provides online access to some of these sources. Students could look at the letter that rebel leader William Barret Travis wrote from The Alamo during the siege.<sup>41</sup> How did he perceive the siege? What did he think of his soldiers and the rebels' prospects for victory? What motivated his actions? Students should also read General D. Antonio López de Santa Anna's brief account of battle.<sup>42</sup> What happened at The Alamo? Why did the rebels have to die? Who was to blame for the bloodiness? And how might the distance of time have influenced his perspective? Finally, students should examine an "outside," but soon-to-be invested, perspective: American interpretations. For example, they could study the 31 March 1836 issue of the *North Carolina Standard* that covered

“News from Texas.”<sup>43</sup> How does the newspaper account for the event? What are its sources? What is the tone or sentiment of the account? Contextually, what else was going on in the United States, according to this newspaper? Is there anything significant about its appearance on the third page?

I am aware that this exercise is not groundbreaking. We regularly offer similar lessons comparing primary sources as a matter of course. But presented with the fear of perceptive errors in mind, students should feel much more confident in participating because they will be less driven by a need to find singular truths. Instead, they should bravely explore complementary and conflicting perspectives of the events that make up larger narratives.

## *2. Managing Preparatory Errors with History-Based Films*

Even though history teachers stress the importance of perspective, we also want students to prepare by digesting in-class lessons and assigned readings. That means that we often seek to measure their management of particular facts and evidence. Here, students who believe in fundamental truths and master narratives find their greatest comfort. While past facts provide the scaffolding for analytically driven courses, we do not want students simply to memorize and regurgitate everything we teach them. Perhaps, then, the best exercise that teaches students how to manage preparatory errors should turn outward, instead of deconstructing our own class lessons. Christine Baron found herself in a similar position when her research team discovered some preparatory errors in the public history of the Old North Church in Boston.<sup>44</sup> They discovered great inconsistencies in the “facts” they researched, especially compared to those in the oral interpretations offered to the Old North Church’s visitors, in the “vanity press” book written about the church, and even in the underdeveloped account of the church in David McCulloch’s *1776*.<sup>45</sup> Although the public did not seem to know—or even mind—the inconsistencies, Baron and her teammates were compelled to “fix” the historical record. They recreated the past by cleaving history from mythology. She believed their research could initiate organic conversations about the church’s history, weaving a new story that could supplant the well-entrenched tale that the public seemed to prefer.

Few historians will have Baron's fortune in discovering a public history "laboratory" for rectifying preparatory errors. Perhaps motion pictures could serve as suitable alternatives. We cannot deny that many students (and the general public) learn about the past from popular movies grounded in historical themes. Historians often bristle at the powerful influence these films can have on historical memory, especially if they offer "inaccurate" or dubious interpretations of the past. Recall the furor that simmered in the historical community when *National Treasure* (2004) presented a tale built on erroneous "facts," including the obviously fantastic premise that a treasure map was hidden in the Declaration of Independence. I remember finding historians' online chatter futile and foolish. Criticizing an adventurous Nicolas Cage vehicle for being historically misleading is much like marine biologists scoffing at a banjo-playing frog in *The Muppet Movie* (1979). We should be grateful that motion pictures, accurate or not, inspire many people to take any interest in history.

As teachers, we should also be grateful that history-based films offer fodder for managing preparatory errors. Hollywood writers, producers, and directors make films knowing that some audience members will be cognizant and critical of historical deviations. So, then, why do they do it? The answer is simple: they believe the past is rarely interesting enough on its own to sell a movie. While film producers have no obligation to be accurate, most feel obliged to entertain. So filmmakers take creative liberties to add intrigue to a story or to patch holes in the extant evidence.

For this exercise, these creative liberties should be in the students' crosshairs (**Appendix B**). Have them select a historical movie that interests them, preferably one rife with historical deviations. Then have students account for anything they think is erroneous: historical facts, fictionalized characters, anachronistic music or costumes, unreasonable interpretations or conclusions. For each of these errors, the students should historically document the deviation, identifying primary and secondary sources that support their claims of inaccuracy. They should also analyze the significance of these preparatory errors. How did the creative liberty change the course of the knowable past? What effect might a deviation have on historical memory? For those brave enough to take on older films, what do the film and its creative liberties say about the ways in which contemporary film producers saw the past? For example, if

students selected *Inherit the Wind* (1960) or *Cleopatra* (1963), how did historical forces and influences in the 1950s and 1960s shape the ways in which people saw the past, and how might that differ from the ways in which we see the past today?

While we might not often consider motion pictures as genuine historical sources, they provide wonderful springboards of inquiry. Like students, filmmakers deliberately prepare for historical presentations. Yet many of them create instances of historical “error.” Unleash the student detectives so they can find solutions and remedies for these errors. Just as importantly, this exercise can inspire the students’ sense of joy in discovering what they already know or can know. Baron noted a similar enjoyment in repairing the Old North Church’s past: “when we solved some mystery, uncovered some great document, imagined a new possibility, we laughed at what incredible ‘geeks’ we were to love this process.”<sup>46</sup> Students should embrace the glory of that “geeky” satisfaction. The gratification that comes with rectifying the past will strengthen their talents as student historians. This skill will also work well in rectifying problems in the outside world and the workplace, as students should be able to market themselves as artful managers and analysts of diverse evidentiary sources.

### 3. *Managing Professional Errors with Scholarly Book Reviews*

A third and optional error exercise could allow students to explore both the perceptive and preparatory errors of professional historians. Historians spend much of their publication energy writing for audiences of fellow historians. The most digestible manifestation of this hermetic dialogue is the academic book review. As matters of professional courtesy and duty, book reviews highlight a scholar’s contributions to the wealth of historical knowledge. As we all know (hopefully not too personally), many reviews fascinate on a book’s weaknesses, whether they be differences in interpretation or uses of evidence. For this exercise, have students read several reviews of a controversial book that has been subject to peer examination (**Appendix C**). An obvious example might be Michael Bellesiles’s *Arming America*, which was stripped of the Bancroft Prize after historians challenged the author’s interpretations and research.<sup>47</sup> In a meta-review essay, have your students catalogue the scholarly

criticisms that cut across their selected book's reviews. In what ways has the author interpreted the past against the accepted grain? In what ways did the author possibly misuse, misinterpret, or ignore available evidence? Are any of these "errors" identified by multiple reviewers? What is the analytical significance of these criticisms? How do these alleged errors threaten the integrity of the author's arguments or presentation? Are any of these assessments heavy-handed or unwarranted? What do reviewers recommend the author and the profession need to do to address these differences? Finally, what can the profession learn from this book, and how might it move forward? Students engaging in this exercise should gain a firmer understanding of how much thought and preparation goes into historical monographs, the pervasiveness of error, and the pitfalls that can await hasty or underprepared authors.

Understandably, history teachers might be reluctant to assign this exercise. I have spoken with colleagues who are unwilling to pull the curtain back, to reveal their fallibility, or to surrender any sense of command in the classroom. Others are loath to show students how professional historians appear at their cannibalistic worst. But I am comfortable teaching students that history is the product of human agency, and I remind them that all its creators—students and professors—are subject to peer scrutiny and to the foibles of fallibility. We have a responsibility to show that historians are also prone to error, and thus we can best model from experience the most appropriate responses in managing those mistakes.

## Conclusion

I hope that this article serves as a nice starting point for discussing with students the benefits that can come being wrong in front of their teachers and peers. We should work with students to reframe their fears of being wrong in two senses. First, they should know that being wrong in the classroom is ultimately a painless experience. I encourage them to take brave, curious, and fruitful risks in learning. Second, I want them to see error as a simple component of the human experience. Nobody is immune from making mistakes, and all should be better prepared to manage their actuality and aftereffects. Hopefully, students can convert these ideas into courage and purposeful action, and use these skills in the outside world, especially

in family, community, and work settings. Even if students do not care much for the subjects we teach, we still have an obligation to turn them into decent people and productive citizens. If they learn during their academic careers that being wrong does not matter as much as they feared, then perhaps they will take the risks that might improve their lives after they have left the classroom.

## Notes

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1. I have changed the student's real name to protect him from potential, but unwarranted, embarrassment.
2. James W. Loewen, *Lies My Teacher Told Me: Everything Your American History Textbook Got Wrong* (New York: New Press, 1995).
3. Kathryn Schulz, *Being Wrong: Adventures in the Margin of Error* (New York: Ecco, 2010). Special thanks go to M. Paul Shank for bringing this book to my attention, thinking I would find it personally and professionally useful. He was not wrong.
4. *Ibid.*, 17.
5. *Ibid.*, 18, 21.
6. *Ibid.*, 27.
7. *Ibid.*
8. Rossella Santagata, "Practices and Beliefs in Mistake-Handling Activities: A Video Study of Italian and US Mathematics Lessons," *Teaching and Teacher Education* 21, no. 5 (July 2005): 495.
9. These types of errors do not operate exclusively or in isolation. Sometimes they are both present in student performances, either as overlapping, or as one causing or reinforcing the other.
10. Schulz, 4-5, 139.
11. *Ibid.*, 139.
12. *Ibid.*, 13.
13. Santagata, 493-494. Proof of this sensitivity to student feelings is that teachers in American classrooms tend to be reward-oriented, often complimenting students for trying, even if their answers are incorrect.

14. Santagata, 491-508. Meg Schleppenbach, Lucia M. Flevares, Linda M. Sims, and Michelle Perry, "Teachers' Responses to Student Mistakes in Chinese and U.S. Mathematics Classrooms," *Elementary School Journal* 108, no. 2 (November 2007): 131.
15. Schulz, 333.
16. Joseph Jastrow, ed., *The Story of Human Error: False Leads in the Stages of Science* (New York: D. Appleton-Century, 1936), 17. Jastrow refers to each of these subjective forces respectively as the idols of Mold, Cult, and Mass.
17. Schulz, 333.
18. For more on historians' complex relationship with objectivity, see Peter Novick, *That Noble Dream: The "Objectivity Question" and the Historical Profession* (New York: Cambridge University Press, 1988).
19. For a study of history graduate program lengths, see Robert B. Townsend, "How Long to the PhD?" *Perspectives on History* 44, no. 2 (February 2006), <<http://www.historians.org/publications-and-directories/perspectives-on-history/february-2006/how-long-to-the-phd>>.
20. Schulz, 30-31, 164, 200, 213.
21. For a brief introduction to my concept of intellectual amnesty in a more specific context (studying legal history), see Dominic DeBrincat, "Lift, Sift, Peel, and Tunnel: Empowering Undergraduates to Embrace Judicial Opinions," *Teaching History* 40, no. 1 (Spring 2015).
22. Schulz, 32.
23. See Raffaella Borasi, "Capitalizing on Errors as 'Springboards for Inquiry': A Teaching Experiment," *Journal for Research in Mathematics Education* 25, no. 2 (March 1994): 166-208.
24. Schulz, 332.
25. Schleppenbach et al., 132, 145.
26. Robert Lundquist, "Critical Thinking and the Art of Making Good Mistakes," *Teaching in Higher Education* 4, no. 4 (October 1999): 523-530.
27. Schulz, 311.
28. Ibid.
29. Ibid.
30. Ibid., 322-323.
31. Maria Tulis, "Error Management Behavior in Classrooms: Teachers' Responses to Student Mistakes," *Teaching and Teacher Education* 33, no. 4 (July 2013): 56-68.
32. Maria Shine Stewart, "Amplify Errors to Minimize Them," *Teaching English in the Two-Year College* 36, no. 3 (March 2009): 293.
33. Robert E. Glenn, "Learning from Your Mistakes," *Education Digest* 65, no. 1 (September 1999): 66.
34. Michael E. Gorman, Jonathan A. Plucker, and Carolyn M. Callahan, "Turning Students into Inventors: Active Learning Modules for Secondary Students," *Phi Delta Kappan* 79, no. 7 (March 1998): 530-535. Also see Patrick J. Eggleton and Carla C. Moldavan, "The Value of Mistakes," *Mathematics Teaching in the Middle School* 7, no. 1 (September 2001): 47.

35. Schulz, 293.
36. Ibid., 335, 338.
37. Mark M. Payne, "Hooray for Wrong Answers!" *The Physics Teacher* 42, no. 2 (February 2004): 125-126. Schleppenbach et al., 132.
38. Schulz, 141.
39. Ibid., 139-140, 174.
40. Schleppenbach et al., 145.
41. "William Barret Travis's Letter from The Alamo, 1836," Texas State Library and Archives Commission, <<https://www.tsl.texas.gov/treasures/republic/alamo/travis-about.html>>.
42. "Santa Anna to McArdle, March 16 [sic], 1874, Letter Explaining Why the Alamo Defenders Had to Be Killed," Texas State Library and Archives Commission, <<https://www.tsl.texas.gov/treasures/republic/alamo/santa-anna-letter-01.html>>. The letter is originally dated March 19, 1874.
43. "News from Texas," *North Carolina Standard (Raleigh)*, 31 March 1836, Library of Congress's *Chronicling America*, <<http://chroniclingamerica.loc.gov/lccn/sn85042147/1836-03-31/ed-1/>>.
44. Christine Baron, "One if by Land! Two if by River? Or, What if Everything You Thought You Knew were Wrong?" *The History Teacher* 43, no. 4 (August 2010): 605-613.
45. Mary Kent Davies Babcock, *Christ Church, Salem Street, Boston: The Old North Church of Paul Revere Fame: Historical Sketches, Colonial Period, 1723-1775* (Boston, MA: Thomas Todd Company, 1947). David McCulloch, *1776* (New York: Simon & Schuster, 2005).
46. Baron, 609. I remember a similar joy I shared with my law school colleagues, deconstructing errors in law-based movies or in episodes of *Law and Order*, as if each was written to test our newly gained knowledge in legal procedures.
47. Michael A. Bellesiles, *Arming America: The Origins of a National Gun Culture* (New York: Knopf, 2000).

## Appendix A

### Exercise for Managing Perceptive Errors

#### Primary Source Exploration: The Assault on The Alamo

**\*Instructions:** For this exercise, please examine the selected primary sources below recounting the 1836 Mexican assault on Texan rebels at The Alamo. For each source, address the related questions. Note, however,

that these questions are intended to be guides, not limitations; explore further if appropriate.

**\*Objectives:** Students should gain greater awareness of the disparity and similarities in perspectives on singular events. Students should be reminded that history is an interpretive field, so they should be confident that their well-grounded and reasonable interpretations of the past are likely not going to be erroneous.

1. **Texan Interpretation:** “William Barret Travis’s Letter from The Alamo, 1836,” Texas State Library and Archives Commission, <<https://www.tsl.texas.gov/treasures/republic/alamo/travis-about.html>>.

- How did he perceive the siege?
- What did he think of his soldiers and the rebels’ prospects for victory?
- What motivated his actions?

2. **Mexican Interpretation:** “Santa Anna to McArdle, March 16, 1874, Letter Explaining Why the Alamo Defenders Had to Be Killed,” Texas State Library and Archives Commission, <<https://www.tsl.texas.gov/treasures/republic/alamo/santa-anna-letter-01.html>>.

- What happened at The Alamo?
- Why did the rebels have to die?
- Who was to blame for the bloodiness?
- How might the distance of time have influenced his perspective?

3. **American Interpretation:** “News from Texas,” *North Carolina Standard (Raleigh)*, 31 March 1836, Library of Congress’s *Chronicling America*, <<http://chroniclingamerica.loc.gov/lccn/sn85042147/1836-03-31/ed-1/>>.

- How does the newspaper account for the event?
- What are its sources?
- What is the tone or sentiment of the account?
- Contextually, what else was going on in the United States, according to this newspaper?
- Is there anything significant about its appearance on the third page?

## Appendix B

### Exercise for Managing Preparatory Errors

#### History Film Exploration

**\*Instructions:** For this exercise, select a historically based motion picture, preferably one that was popularly received. Your task is to identify the film's creative liberties and analyze their significance. For each inaccuracy, use primary and secondary historical sources to document and demonstrate the deviation. Then explain each inaccuracy's importance in framing historical memory.

**\*Objectives:** Students should have a firmer appreciation for the efforts that go into creating presentations that are faithful to the known or knowable past. They should also better appreciate the effects that preparatory errors might have on historical understandings and memories.

**\*Questions Considerable:** For your selected film, answer the following questions when possible:

- Are there any factual errors?
- Are there any fictional characters?
- Are there any anachronistic music, costume, or styling choices?
- Does the film reach any unreasonable or inappropriate conclusions or interpretations?
- If the film is old enough for sufficient historical distance, how did historical forces and influences from the time period in which the film was created shape the ways people saw the past, and how might it differ from the ways in which we see the past today?
- Why might the filmmakers have deliberately chosen to deviate from the known or knowable past?

*\* Note that these questions are intended to be guides, not limitations; explore further if appropriate.*

## Appendix C

### Exercise for Managing Professional Errors

#### Meta-Review of Controversial Monograph

**\*Instructions:** For this exercise, select and read a controversial history monograph that other scholars have reviewed, preferably one that has been challenged for its differences in interpretation or uses of evidence. Then locate at least three scholarly book reviews of your selected monograph. Your task is to catalogue the reviewers' criticisms and points of contention, and analyze the significance of their comments.

**\*Objectives:** Students should gain a firmer appreciation for how much thought and preparation must go into writing historical monographs, the pervasiveness of error, and the pitfalls that can await hasty or underprepared authors.

**\*Questions Considerable:** After reading the selected monograph, answer the following questions when possible:

- In what ways has the author interpreted the past against the accepted grain?
- In what ways did the author possibly misuse, misinterpret, or ignore available evidence?
- Are any of these "errors" identified by multiple reviewers?
- What is the analytical significance of these criticisms?
- How do these alleged errors threaten the integrity of the author's arguments or presentation?
- Are any of these assessments heavy-handed or unwarranted?
- What do reviewers recommend the author and the profession need to do to address these differences?
- What can the profession learn from this book, and how might it move forward?

*\* Note that these questions are intended to be guides, not limitations; explore further if appropriate.*