

Changing Epistemic Beliefs? An Exploratory Study of Cognition Among Prospective History Teacher

Abstract

This study explores changing epistemic beliefs in the history domain among 18 prospective history teachers. Drawing data from these college undergraduate history majors who were considering teaching careers, the study traces out an exploration of how epistemic beliefs may change at this crucial developmental point. A likert-scale instrument served as a primary data-gathering tool and it was administered in a pre-post, design. Observational and interview data augmented the scale data. A university-based course served as an educational vehicle designed to influence epistemic beliefs. The results among the prospective teachers were mixed. Some students' epistemic beliefs remained unaffected by the course, while others changed, some quite dramatically. Reasons for varied influences are the subject of the discussion. Implications of the results are also considered.

Keywords: Epistemic Knowledge; Historical Thinking; History Teaching; Prospective Teachers.

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Crenças epistêmicas em mudança? Um estudo investigativo do conhecimento entre futuros professores de história

Resumo

Este estudo investiga crenças epistêmicas em mudança na área de história entre 18 futuros professores de história. Colhendo dados desses estudantes de graduação em história que estavam considerando seguir a carreira docente, o estudo procede a uma investigação sobre como as crenças epistêmicas podem mudar neste momento crucial de desenvolvimento. O instrumento de escala Likert serviu como ferramenta para reunir dados primários e foi aplicado em um estágio antes e depois do curso. Dados de observação e de entrevista aumentaram os dados da escala. Um curso sediado em uma universidade serviu como veículo educacional com o objetivo de influenciar as crenças epistêmicas. Os resultados entre os futuros professores foram mistos. Algumas crenças epistêmicas dos alunos não se alteraram, enquanto outras mudaram, e algumas fortemente. As razões para as influências variadas são o tema da discussão. E as implicações dos resultados também serão considerados.

Palavras-chave: Conhecimento epistêmico; Pensamento histórico; Ensino de história; Futuros Professores.

Introduction

Danielle, a seasoned American history teacher, in responding to a question that asked her to discuss what she considered history to be and the roles facts and interpretations played in the work of constructing histories, responded this way:

For me, history is never just the facts, because you really don't know what occurred unless you go in and research it, and then you know for sure what happened during the time period. So, you can gather information about a particular historical event up to a certain point, but depending on the documents you pick or the people that you talk to, there will always be bias I guess....

In trying to understand her beliefs about history through comments such as these, we need to look closely at what she says. First, she appears to believe that the past leaves for us some brute facts to consider. Yet, in order to make sense of them, some additional digging is necessary. That digging implicates the role of an investigator. As such, history appears to emerge in an interaction between an interrogator (the knower) and the past and its *residua* (what is to be known, or the object of the knower's attempt to know). So far so good it would seem.

Then Danielle shifts to entertaining more about the inner workings of that interaction between the knower and the historical objects to be known. Knowers can plumb the depths of the past, but only "to a certain point." At that point, bias takes over. With a bit of symbolic shoulder shrugging embedded in her final phrase, "I guess," Danielle signals that she may not think the problem of bias is surmountable. As her voice trails off, we are left wondering whether she, as historical investigator and potential knower, possesses any criteria for managing bias. In the initial portions of her comment, she seems convinced that research can provide some "sure" historical knowledge. But her trailing phrase appears to undo that confidence. Bias appears to be all we are left with and we have little hope, perhaps, of dealing with it successfully as we try to get to the bottom of what "really happened" in the past.

Why is any of this important? First, some people's protestations to the contrary, serious historical study plunges knowers into a paradoxical position relative to what they wish to know about the past. As Joan Wallach Scott (1996) once observed, no matter

how much a knower may wish to tell the past as it really happened, to tell it true so to speak, such a move is denied, because we have yet to find the means to reconstruct the past and relive it in order to know its truth. The past as it really happened is lost to us in the present. All the knower has at her disposal are shards of and remnants and residue from the past that must be interpreted. And as Danielle appears to lament, bias surfaces at every turn. The remnants all contain it and, perhaps more importantly, so does the knower, who cannot help but interpret those them from her contemporaneous temporal anchors and the inescapable perspectives she maintains. In the end, all historical investigators appear to have at their disposal, if their epistemic cognition is well honed, is what historian James Kloppenberg (1989, p. 1030) called a type of pragmatic hermeneutics that allows for nothing more than “...hypotheses, provisional syntheses, [and] imaginative but warranted interpretations”. Danielle wants to know “for sure,” but she cannot. What is she to do?

And second, this issue is of concern because Danielle is not the lone historical investigator, scurrying among the archives trying to ferret out the past’s truth for the next history she will author. She’s a secondary American history teacher with over 100 students to whom she is educationally responsible every day. If she is epistemically, and by extension, cognitively stuck on this problem of bias, what will she teach her students about how to deal with it? She had noted earlier in the interview about how important it is to teach her kids about the past using source materials that go beyond the textbook’s account. She believes it is important to her charges’ knowing and to their task of becoming better knowers. But in the process, she risks hanging them up on the same powerful, knower/knowing paradox, especially if the accounts and sources she gives them promote interpretive conflicts and are riddled with bias, something that is nearly if not wholly inevitable. If she has not resolved this problem for herself, say, via a type of pragmatic hermeneutics—and there is no evidence from her comments that she has—what will she teach her students once they encounter the issue? Will her students come away from reading bias- and conflict-laden accounts with the idea that it’s all just bias all the way down, and therefore any story one might tell would be as good as any other story because it’s all just someone’s opinion anyway? Of course, we cannot tell without

visiting Danielle's classroom. Her comments, though, are not particularly reassuring.

It has become increasingly attractive for history teachers to supplement course readings with sources other than the textbook (e.g., HICKS; DOOLITTLE; LEE, 2004). Juicy primary accounts are especially coveted among history teachers because, they say, they increase interest and engagement. Whereas textbooks perennially bore, firsthand accounts can better incite curiosity, beg questions, and otherwise stimulate attention. Such accounts have also proliferated on the Internet, making their accessibility only a matter of a few digital clicks. Yet, what are the consequences for kids of this move toward expanding accounts? How do teachers help them deal with the problem of perspective they encounter upon entering this world? And what tools do teachers have in their own epistemic toolkits for dealing with this knower-knowing problem, tools they could share in their classrooms? Where are they supposed to learn them? You cannot teach what you do not know. These questions served as the underpinning of the present study.

Relevant Literature

Over a decade since the beginning of the new millennium, we have studied history teachers such as Danielle in the context of Teaching American History grant projects in the USA. Such projects were designed to reshape how they teach. These projects endeavored to help teachers learn how to teach historical thinking practices to their students on the assumption that to understand the past more deeply, students need to upgrade their thinking practices. In short, directors and professional developers on these projects attempted to take advantage of the burgeoning research in history education in an effort to shift teachers' practices away from the ubiquitous PowerPoint presentations of repackaged textbook histories and more towards historical study as an investigative enterprise that depends on being able to think historically. In order to teach historical thinking, the directors and developers reasonably surmised, teachers would need to know how to do it themselves. Our role as independent evaluators on these projects taught us that learning to think historically was no mean feat. We started to attune our

attention to data we were collecting from the teachers that began to show us that a number of the teachers held beliefs about the nature of historical knowledge, where it comes from, and how it's warranted that seemed to block their progress.

Effectively many were like Danielle. They could fairly quickly come to idea that history was an interpretive enterprise that relied on a capacity to think and reason historically, to realize that making sense of perspective was crucial. However, they would then become ensnared on what some of them would call the problem of bias. That is, it seemed to them that it was inescapable bias—all the way down. How could one arrive at a solid interpretation if bias and opinion crept in everywhere? And as Danielle alludes, accounts from the past—the key venue from which interpretations could be drawn—were all just people's opinions and interpretations rooted in their own personal positionalities of the time. Many would conclude that history was whatever the investigator wanted it to be. Some histories were simply written better and some were more rhetorically persuasive, but not necessarily accounts that were closer to what actually happened. These teachers would become, sometimes rather begrudgingly and often despairingly, abject relativists, stuck in a rather uncomfortable epistemic position that one could not warrant knowledge in history except to say that histories were little more than various investigators' opinions, and we are all entitled to hold our own. When we would visit their classrooms on occasion, we would observe them teaching (intentionally or otherwise, we could not always tell) such ideas to their students.

We hypothesized that the teachers failed to explicitly learn what Kloppenberg (1989, p.1030) called a pragmatic hermeneutics, a process he says supplants “the noble dream of scientific objectivity” while also eschewing “the nightmare of complete relativism”. Pragmatic hermeneutics, if Kloppenberg is to be believed, appears to be the way around the problem, at least in history. But how does someone develop an epistemic position framed out by pragmatic hermeneutics? We turned to the research literature to see if and how others had researched this issue, the problem of what to do when, in Kloppenberg's terms, the pursuit of objectivity becomes impossible and the alternative of complete relativism feels more like a frightening nihilism.

Epistemic cognition can be understood as “as the cognitive process enabling

individuals to consider the criteria, limits, and certainty of knowing” (MAGGIONI; VANSLEDRIGHT; ALEXANDER, 2009, p. 188). An individual’s epistemic stance therefore defines what counts as knowledge and how that knowledge can be acquired and applied. These conceptions of knowledge, which shape an individual’s belief structures (HOFER, 2002), powerfully impact one’s understanding of teaching and learning within a subject matter (HOFER, 2002; HOFER e and PINTRICH, 1997; LAMPERT, 1990; SCHOENFIELD, 1983). Within the domain of history, these habits of thought are used to make sense of historical concepts, influence a person’s ability to work with historical texts, and affect the overall ways in which a he or she approaches the study of past.

When considering the ways in which people think about history, it is important to acknowledge their epistemological understandings surrounding the nature of domain knowledge. Specifically, it is important to consider the relationships between the investigator—the knower, and the past—what’s to be known. Such dimensions represent ways of knowing, which dictate how and what a learner constructs as knowledge.

Often, the literature indicates, novices approach sources in history as “decontextualized, disembodied authorless forms of neutral information that fall ready made out of the sky” (VANSLEDRIGHT, 2010, p.116). This epistemic stance is characterized by an understanding of history as a direct mirror of the past. The knower or the investigator is absent (MAGGIONI; VANSLEDRIGHT; REDDY, 2009). These learners do not decipher between the past and historical accounts, as they believe them to be one in the same. Knowledge, as presented within historical accounts, is understood to be absolute (KUHN; WEINSTOCK, 2002), or dualist—being either right or wrong (HOFER, 2001), and acquired through authoritative renderings (KING; KITCHENER, 2002). Cognitive impasses occur when evidentiary conflicts surface, such as when historical documents present differing ideas about the same event. These impasses leave the investigator mentally paralyzed and able to do little more than ambiguously choose one account as the capital-T-truth (frequently one officialized by authorities or one that sounds particularly authoritative; see PAXTON, 1999), while discounting the others as fictitious or inaccurate due to author bias or error.

Other learners have quite the opposite epistemic understanding of historical knowledge. These learners view knowledge creation in history as the result of opinion. They “tend to borrow their story from accounts or pieces of accounts on the basis of instinctive preferences or casual selection” (MAGGIONI; VANSLEDRIGHT; ALEXANDER, 2009, p. 198). Also known as “cut and paste” investigators, they have limited strategies to judge historical sources (LEE and ASHBY, 2000; VANSLEDRIGHT, 2011). They do acknowledge the active role of knower in the process of knowledge generation. But a naïve understanding of author perspective and positionality often drive them to conclude that all historical accounts are equally biased and/or equally trustworthy or untrustworthy as the case may be (LEE; SHEMILT, 2003; MAGGIONI; VANSLEDRIGHT; REDDY, 2009). Therefore, these erstwhile knowers equate the known (aka, the past) with whatever accounts they can piece together. However, they often quickly discover that cutting and pasting fails to solve for the problem of knowing and understanding. More cognitive impasses ensue. Lacking the epistemic understanding to reconcile these gaps (i.e., judgment criteria associated with the concept of reliability), these knowers often wind up frustrated and unable to move forward with the construction of historical understandings (LEE, 2004). Danielle comes to mind here.

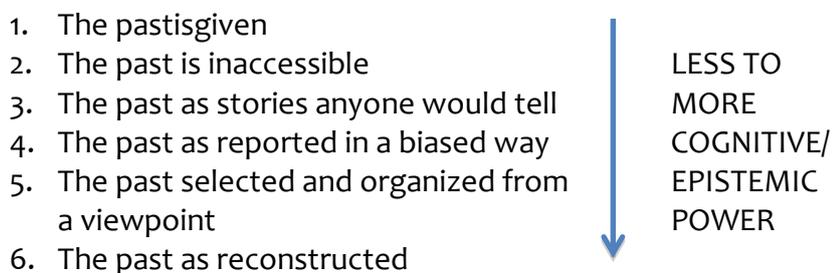
Finally, there is yet a third epistemic position often used to characterize the epistemological stances of learners who have developed more expert ways of knowing. These knowers believe that the construction of history is neither absolute nor relative. Rather they understand the importance of disciplinary heuristics in the development of authentic historical interpretations. They view knowledge as actively constructed (KING; & KITCHENER, 2002) by the knower through the use of conjectural logic. It is always evolving and ways of knowing are coordinated with evidentiary judgment and justification (HOFER, 2001). Generally speaking, they are able to reconcile the cognitive impasses often experienced by other types of knowers by acknowledging the positionality of evidence, using procedural understandings, which demand that evidence be carefully evaluated for consistency and reliability, and bridging gaps between accounts using logical sequencing of events or contexts. This stance directly links and coordinates the role of the knower, or the historical investigator, with what is to be known (the past)

via the application of criteria and tools for making decisions. These knowers appear to utilize a pragmatic hermeneutics (KLOPPENBERG, 1989).

Both learners' prior experiences and epistemic beliefs are essential to understanding how they negotiate the conceptualizations necessary to participate in historical thinking in ways that enhance their understandings. To aide in the continued study of how historical cognition evolves, researchers have constructed progression models intended to better understand the development of epistemic stances in history (e.g., LEE and ASHBY, 2000; LEE and SHEMILT, 2003). Due to the hierarchical presentation of progression models, they sometimes carry the implication that students work from less to more powerful ideas (LEE;SHEMILT, 2003). However, scholars caution that these models are not meant to be understood as linear.

Historical thinking as a process and a method of knowing, is a cognitive domain which often proves to be quite fluid with regard to how individuals epistemically move from one level to another. Lee and Ashby (2000) suggest, however, that there is a model that can help to assess the parameters through which learners move closer to or farther away from deeper understandings of the past. Lee and Ashby's and Lee and Shemilt's (2003) progression models illustrate the typical advancement of individuals as they learn how to reason historically. This progression model can be illustrated by Figure 1.

Figure 1. A Model of Epistemic Movement in Relation to Understanding the Past



Research in epistemic beliefs has shed only partial light on learner epistemic beliefs in history because studies often have used domain-general questionnaires (e.g., STRØMSØ & BRÅTEN , 2006), thus likely missing the domain-specific component

suggested in the literature (BUEHL and ALEXANDER, 2001; MUIS and HAERLE, 2006). Conversely, researchers focusing specifically on the history domain (e.g., LEE; ASHBY, 2000) have mainly *inferred* student epistemic beliefs from their performance on specific tasks (e.g., reading of multiple historical sources or writing of document-based narratives). As a result, descriptions of students' epistemic ideas as they emerged in their own voices are relatively scarce.

This study explores epistemic beliefs in the history domain in a more direct and focused fashion with a purpose aimed at contributing a more in-depth description of the ideas entertained by learners and to identify facilitating factors and potential stumbling blocks (i.e., cognitive impasses) in their epistemic development in the domain. Working with college undergraduate history majors in the USA, this study explores how epistemic beliefs in history may change at this crucial developmental point. In order to launch the study, we developed a theoretical framework that drew from the aforementioned literature, our own prior research efforts, and a cluster of theorized assumptions.

Theoretical Framework

Prior to their collegiate careers in the USA, many teachers like Danielle undergo extensive experiences in classrooms with traditional, consumption-oriented school history. During these formative years, prospective teachers develop their own understandings of what it means to teach and to learn (BRITZMAN, 1991). The apprenticeships of observation (LORTIE, 1975) can be central to the construction of epistemic beliefs about historical knowledge. They often shape durable values "...about the nature of school subjects, how teachers and students should behave in the classroom and what constitutes 'good' teaching" (KENNEDY, 2005, p.14). The apprenticeships can continue right up to, and sometimes through, formal teacher preparation programs. By this we mean, for example, the kinds of history courses taught to history majors in cavernous university lecture halls by a talking head narrating from a Powerpoint presentation. Our assumption, bolstered by the literature, is that these types teaching and learning apprenticeships are common and help form and solidify the foundation from

which prospective history teachers come to understand what history is (CUBAN, 1991). They also reinforce, and are reinforced by the consumer culture, especially prevalent among western nations.

If prospective history teachers do not have their school history apprenticeships interrupted in their collegiate history courses, then the typical structure of most traditional teacher preparation programs provides little time to foster meaningful epistemic change necessary to engage with the practices, ideas, beliefs, and judgment criteria that research shows improves understanding. Thus, we reasoned, a gap exists at least in the USA between how prospective teachers are exposed to history prior to formal teacher preparation and an understanding of the nature of how history works epistemically from knower to what it means to know. Consequently, we asked: Where are prospective history teachers supposed to gain this knowledge and epistemic understanding and in what learning context should it occur?

Experience with teachers like Danielle coupled with the literature on epistemic beliefs in history theoretically served as the basis for our design of a course prospective history teachers could take prior to their entrance into a formal teacher-preparation program. The course was developed with three goals in mind rooted in the forgoing theorizations: (a) to help the enrollees examine the sorts of epistemic beliefs they held, (b) to assist them in understanding more about the ways in which some of those beliefs created impasses in their knowing of the past, and (c) to offer them some new ways of thinking about historical knowledge and historical-claims justifications that might help them overcome those impasses. Such a course, we hoped, would provide opportunities for prospective history teachers to bring to the surface their existing epistemic stances through inquiry and reflection. Wrestling with these complex ideas and engaging in epistemically challenging activities, we further theorized, would afford students the opportunity to understand the cognitive limits of their beliefs. We hoped that, in the course, they would find meaning and utility in more powerful epistemic beliefs associated with the sort of historical thinking and judgment capabilities that cultivate deeper understandings of the past. Doing so, we imagined, might enable them then to strengthen their pedagogical capacities once they found themselves in positions akin to

Danielle's.

Method

An “Introduction to History Teaching”

In an effort to address the epistemic issues history teachers we observed appeared to be experiencing, the first author sketched the curriculum for the course. With the cooperation of the university's history department, he offered the course to history majors twice in two consecutive semesters at a large public university in the USA. The course met once a week (14 sessions) for 75 minutes. Students enrolled in it voluntarily and earned one credit if they finished the course satisfactorily. This involved completing several rounds of questionnaires and other assignments including the construction of two lesson plan drafts, reading assigned texts, and actively participating in class discussions that hinged on making sense of cognitive impasses and on ways of skirting them.

In brief the course began by raising epistemic questions such as: What is history, what is the difference between history and the past, where do histories come from, what's the difference between a fact and an opinion, and what constitutes an acceptable evidence-based historical interpretation or argument? The questions were discussed both directly and through exercises that involved reading conflicting accounts regarding historical events (e.g., What happened at the Battle of Little Big Horn?) or about individuals (e.g., Who was Abraham Lincoln, the Great Emancipator, or...?). The syllabus for each course was the same except that the historical period examples were changed to reflect a focus on pre-1865 American history in the first version of the course and post-1865 in the second version.

The course involved using a set of teaching-learning strategies that were designed to surface enrollees' epistemic beliefs and open them up for consideration and discussion. The course then assisted them in identifying beliefs that created cognitive impasses of the sort Danielle experiences. Finally, the course provided concrete ideas and strategies for developing Kloppenberg's (1989) pragmatic hermeneutics on the assumption that doing so would help students get beyond those impasses, and eventually enable them to do the same with their future students.

Participants

The group comprised 18 students. The first cluster of 11 students took the first course iteration and the second cluster of seven students took the second. In each course, students comprised a range of freshmen (n=3 of 18), sophomores (n=6), juniors (n=7), and seniors (n=2). All but three were self-declared history majors and three of the 18 were history/education double majors. Four students—Genevieve, Lily, Josie, and Michaela—two from each class agreed to be interviewed in depth about their epistemic beliefs with regard to a Likert-scale instrument that assessed those beliefs and the nature of the course experience with respect to those beliefs.

Primary Measure

We used the Beliefs about History Questionnaire (BHQ) to specifically explore and collect data on students' epistemic beliefs in history. This 22-item, 6-point Likert scale questionnaire (see the Appendix) is a refinement of a measure whose factor structure was investigated, tested, and validated in previous studies (MAGGIONI ET AL. 2004; MAGGIONI ET AL. 2009). Its statements were designed to reflect different conceptualizations of the nature of historical knowledge and exemplify beliefs characterizing three epistemic positions theoretically deduced from the literature on epistemic cognition (e.g., KING and KITCHENER, 2002; KUHN and WEINSTOCK, 2002) and historical thinking (e.g., LEE and SHEMILT, 2003; VANSLEDRIGHT, 2011; WINEBURG, 2001).

In particular, some of the statements reflect beliefs in an authorless view of history, simplistically conceived as “what it was” (e.g., “The facts speak for themselves.”). Consistent agreement on such items, we theorized, reflect what we might call a form of naïve realism or what we began calling *objectivism*, wherein history is understood as merely a copy of the past. This position would be related to a naïve version of Kloppenberg's (1989) idea of “scientific objectivity” in history.

Other statements signal that history can become fundamentally subjective because the past becomes visible to us mainly (only?) through the voices of witnesses

and historians (e.g., “The past is what the historian makes it to be”). Consistent agreement with such statements, again by our literature-based theorizing, suggests a stance of naïve *subjectivism*, at least in how items are worded on the BHQ. In an extreme form, it would be in some ways similar to what Kloppenberg (1989) calls “complete relativism.”

Finally, a third group of statements reflect awareness that history results from a process of inquiry: History emerges from the interaction between the historian (the knower) and her questions and the archive, or what’s to be known (e.g., “Reasonable accounts can be constructed even in the presence of conflicting evidence.”). This position involves knowing something about criteria for disciplining the inquiry process and producing defensible histories. Based yet again on our theorizing, we might refer to a person who would consistently agree with such statements as an adherent of *criterialism* (Kloppenbergs’s pragmatic hermeneuticist). We describe how we arrived at and then defined each of these epistemic positions on the BHQ in more detail in the following.

Procedures

Participants responded to the statements of the BHQ twice, once at the very beginning and once at the end of the semester. They responded to the BHQ primarily in writing. The first BHQ administration took place on the first day of the course and the second occurred on the final day for each semester’s version. After students completed the BHQ the second time, they were given the initial version and asked to analyze changes in their responses. For each item on which their position had shifted (to greater or lesser agreement/disagreement), they were asked to identify the statement by number and explain in writing why their position had shifted. The four key informants—Genevieve, Lily, Josie, and Michaela—who were interviewed (by the second author), were asked in greater depth to discuss such changes, adding to or further explaining what they had written. We identified these four near the beginning of each course iteration based on inter-related contrasts in the backgrounds (declared major, race/ethnicity to the extent possible, collegiate level) and on their initial responses to the

BHQ. The second author, who sat in on classes but did not directly participate other than to record fieldnotes of course activities, interviewed them several times throughout each semester in which they were enrolled.

Data Analysis

BHQ Data. We initially relied on a set of prior studies to theorize a set of codes we could use to begin analyzing and understanding the BHQ data. The three we began with were copier, borrower, and criterialist positions after (MAGGIONI ET AL., 2004; 2009, MAGGIONI ET AL., 2009). An iterative process of analysis ensued in which we discussed new categories to represent aspects emerging from the data that were not previously described by literature-based descriptors and checking the revised rubrics against the data, until most of the data could be coded according to the rubrics and no new aspects emerged. Thus, we used both deduction from principles and induction from the data in the development of the three refined categories, *objectivism*, *subjectivism*, and *criterialism*.

In order to provide some validation for the three categories, we noted that they were compatible overall with Kuhn and Weinstock's (2002) and King and Kitchener's (2002) models of epistemic development, wedding them with the developmental trajectory of the concepts of the past, evidence, and historical accounts described in the work of Lee and his colleagues (LEE, 2004; LEE and ASHBY, 2000; LEE and SHEMILT, 2003). In particular, following Kuhn and Weinstock, we found it useful to characterize different epistemic beliefs along a continuum representing different combinations of the subjective and objective dimensions of knowing. The descriptions that follow are ordered with reference to this characterization. Our colleague, Liliana Maggioni, then did some independent, additional inter-rater analytic work with another colleague of hers to further validate the three categories and the continuum on which they fell (see MAGGIONI; VANSLEDRIGHT; REDDY, 2009).

At one end of the objective-subjective continuum, the first category, *objectivism* describes a naïve view of knowing in which there is no overall awareness of the role of the knower. Lee and Shemilt (2003) have described a similar stance: Remnants of the

past are conceived as brute facts granting immediate access to the past; the role of argument in deciding what remnants count as evidence is not acknowledged and eventual impasses (e.g., unresolvable conflict among differing accounts) are blamed on the incorrectness of the “information.” At best on this view, investigators are entrusted with the task of discriminating between true and false artifacts or witnesses, and faithfully reporting the unadulterated story told by these objective remnants, as in the von Rankean notion of letting the past speak in its own words.

On the epistemic flip side of objectivism lies *subjectivism*. In the subjectivist’s case, the role of the knower is perceived, often naïvely among novices, as predominant and for the most part, unbounded or unrestrained by any reference to something existing outside of the knower; thus, the role of evidence in the construction of arguments is not typically acknowledged or sometimes is understood as opinion. This idea is echoed in Lee’s work (2004), in which he reported that some students explained differences in accounts as an “author problem,” due to mistakes or differences in points of view and the “problem of bias.” In the present study, statements reflecting these beliefs underscored issues of personal opinions and/or bias, and rarely mentioned the difficulty in discriminating among different testimonies. Relativistic beliefs (see KLOPPENBERG, 1989), we had hunched, were at the root of this stance.

Two additional categories emerged from our inductive-deductive analysis. The first describes the often epistemically bumpy and cognitively inconsistent attempts to integrate the role of the object (the past) and of the subject (the knower) in the generation of knowledge and understanding—a type of epistemic wobbling. In our rubric, we named these two stances as *transitional* (TR1 and TR2), because students seemed to oscillate between the arguments and ideas characterizing the two extremes (objectivist and subjectivist stances), frequently in their written explanations of changes in epistemic stances on the second BHQ administration. These students remained unable to produce a coordinated knower-known synthesis and get past the cognitive impasses that such stances often created.

Utterances expressing the epistemic stance named as TR1, voiced the ardent wish for history to simply coincide with the past. In other words, historical investigators were

viewed as “wannabe” chroniclers, thus sharing much with the *objectivist* stance. However, these expressions simultaneously conveyed the awareness that solid knowledge of the past is always, or at least very often, impossible because the interpretation of what we have left from the past is debatable or because we are simply left with too little. In these cases and with some lament, respondents would slide then into describing history as a hopelessly subjective endeavor and it became just a matter of people’s opinions, echoing several of the ideas characterizing a *subjectivist* stance. However, contrary to a more consistent *subjectivist* stance, these utterances conveyed participants’ regret over these occurrences, expressed the belief that this should not necessarily be a universal condition for historical knowledge, and struck a sharp dichotomy between facts and opinions in an effort to override their sense of dismay and avoid the impassable adherence to relativistic beliefs created. Students reflecting TR1 positions appeared to be jaded objectivists, disheartened by the fact that, in history anyway, things were such that too much error and bias crept in to make definitive, objective knowledge possible. And that was to everyone’s loss. Perhaps, they seemed to think, we just needed to try harder to get to the bottom of the matter, without knowing how.

By contrast, TR2 signals clearer movement toward coordination between object of knowledge and subject of knowledge generation, and is expressed by statements that acknowledge that history is the interpretive work of the knower based on the evidence (something TR1 wobblers do not acknowledge). However, these statements also indicate a fairly profound lack of clarity about methods, criteria, or judgment that would allow such coordination. In other words, although such respondents appeared to understand the need for criterialism (a pragmatic hermeneutics), they simply were not sure where to get it or how to go about it. Effectively, they remained stuck.

The final developmental step on the continuum envisioned in Kuhn and Weinstock’s (2002) and King and Kitchener’s (2002) models, and also implicated by Lee (2004) involves the coordination of the objective and subjective aspects of knowing, a stance represented by what we call and coded as *criterialism*. Individuals sharing this stance would recognize the interpretive role of the knower in choosing and evaluating the past’s *residua*. In Lee’s terms (2004), these individuals would acknowledge that

differences among accounts depend on the very nature of historical accounts. However, they would also acknowledge that such interpretive work relies on specific criteria and heuristics that characterize a historical method. For example, this method allows the investigator to transform the remnants of the past into evidence, by asking of historical accounts questions that they were not necessarily designed to answer and by placing them in their historical context. To warrant historical claims then requires careful examination of available accounts vis-à-vis questions an investigator is asking, a systematic evidence corroboration process that results in evidence preponderance—a key criterion in making knowledge claims, an effort to support claims by making such evidence transparent via citation, and subsequent checking by peer review.

The criterialist also understands that, when evidence is thin or non-existent, a degree of subjectivist imagination is required in order to piece together historical claims. Therefore, a more objectivist reliance on evidence can be integrated with subjectivist elements in a reasonably successful coordination of beliefs, animated by strong ideas about how to conduct such an integration in ways that are acceptable to others who share the same general epistemic beliefs. Such coordination solves for cognitive impasses that plague the (naïve) objectivist, who does not know how to reconcile conflicting accounts, and the (naïve) subjectivist, who possesses no criteria for determining defensible historical accounting from that which is less so. As a result, the criterialist position allows for history to become doable again (see LEE, 2004).

In analyzing the students' epistemic beliefs, we had to rely heavily on their responses to items on the BHQ and their written explanations about their changing ideas. Due to resource limitations, we were able to interview only the four noted more extensively about their BHQ response changes. As a result, we developed a method of weighting the responses for the 6-item Likert scale on the BHQ. The idea was to gauge the magnitude of change pre-course to post-course, as a means of seeing movement among the students that the course design experiment was attempting to provoke. This in turn, we theorized, might shed light on how better to code the students' post-course stances on the categorical continuum and help us better understand the written comments registered and the explanations of the four interviewees. This approach was underpinned by a theoretical position that stipulated that consistency of response across

items in a particular category (objectivism, subjectivism, criterialism) would signal a reasonably secure adherence to that belief stance. Regular variations in responses, on the other hand, would more aptly signal a transitional stance. In scoring the responses, there were three issues we needed to resolve. The first dealt with weighting.

The BHQ's Likert scale contains 6 levels of agreement/disagreement: strongly agree (6), agree (5) somewhat agree (4), somewhat disagree (3), disagree (2), and strongly disagree (1). To weight this range, we scored the 18 students' responses using the following equivalencies: 6 = +3; 5 = +2; 4 = +1; 3 = -1; 2 = -2; and 1 = -3 (Range: Strongly agree = +3 to Strongly disagree = -3).

The second concerned the types of items. We identified two subscales on the BHQ to help differentiate understanding of results (following BUEHL & ALEXANDER, 2001). Doing so required us to label items by virtue of which type of the three stances they were theoretically intended to sample by subscale. The two subscales were identified as (a) items designed to sample epistemic *beliefs about history* as a discipline or topic. We labeled it as History, or H; it comprised 13 items. The other subscale sampled *beliefs about history teaching and learning*. We abbreviated it to HTL; it was comprised of 9 items. Each student's responses on the two subscales were assessed separately using the +3 to -3 scoring range.

On the H subscale there are 5 items that measure the criterialism category responses, 3 on objectivism responses, and 5 on subjectivism responses. On the HTL subscale, there are 4 items that measure criterialism responses, 2 on objectivism responses, and 3 on subjectivism responses. To illustrate scoring for subscales and categories within them, imagine that Student A circled 4, 6, 2, 5, and 5 Likert responses on the five criterialism items that assess that stance on the H subscale. Weighting translates this to +1, +3, -2, +2, and +2 respectively, for an additive total of +6. Because there are 5 items in this subscale category, we divided +6 by 5 to arrive at a score of +1.2 (out of a maximum agreement/disagreement score of +3/-3). In interpreting such a score, we would characterize it as "weak agreement" with the criterialism category because of its close proximity to 4 (somewhat agree, or +1 in weighting) on the Likert scale. We engaged these steps with each subscale and category within them to arrive at scores in

categories across the two subscales.

The third issue involved developing a consistency score. To assess a sense of overall consistency, we were most interested in the degree to which responses aligned with the criterialism stance, since it was the intended target of the university course. We created a ratio (expressed in percentage) of objectivist and subjectivist responses to criterialist ones. For example, if a student was in agreement (+1, +2, or +3) with all criterialist items and in disagreement (-1, -2, or -3) on all objectivist and subjectivist items, they would have a 100% consistency score. Because we were checking here for degree of consistency with criterialist beliefs, the quickest method to calculate a consistency score was to read students' likert responses and identify how many of those responses expressed *disagreement* with criterialist items and *agreement* with objectivist and subjectivist items on the BHQ. By totaling them as "disagreements with criterialism," subtracting them from the total number of items (22), and then dividing by 22, we arrived at the final consistency score (e.g., 22 total items minus 5 inconsistent responses = 17/22 or 77%).

In order to code the full outcome of students' responses by belief category, we employed two theories based on iterative analyses of these data. First, regards change over time. If, given its intended criterialist-developing goals, the course was successful for a given student, criterialist scores would increase while objectivist and subjectivist scores would decrease. The second theory here was that to be a criterialist, one would need to score above an averaged +2.5 (approaching strongly agree) on the criterialist items (both H and HTL subscales) and score negatively (i.e., in disagreement) above at least an averaged -2.0 (disagree) on all objectivist and subjectivist items.

This is a high epistemic bar, but in our analyses, we had theorized a high bar all along in response to expert historians' comments on the validity of the scale (MAGGIONI et al., 2009), possible strong social desirability effects for criterialist items and, relatedly, past studies (e.g., KING & KITCHENER, 2002) in which participants selected stronger, more positive responses on the criterialist-type items than their subsequent oral-response rationales could justify. To aid with this process of keeping the categorizing bar high, a consistency score was also calculated on the basis of responses to all 22 items. We

maintain that consistency is a key feature in being able to assess stances. We used a consistency score at or above 90% as a gauge of the consistency with criterialism beliefs on the BHQ necessary to signal a reasonably solid and stable criterialist stance.

Interviews. To augment this process, we analyzed the interview data from the four students and written comments from the 18. Rather than code and categorize these qualitative data, we used them to help substantiate the BHQ coding process just described. If, for example, the qualitative data suggested that our BHQ analyses were inaccurate because a particular student provided a rationale or warrant that countermanded it, we adjusted our categorization to fit the uttered or written rationale or warrant. However, those adjustments were rare. The qualitative data consistently supported the BHQ codings, likely due to the stringent bars we set for levying rubric categorizations.

Results and Interpretations

We begin by presenting results from our analyses of the BHQ data, specifically how students scored on the Likert-scale items pre-course and post-course, and how we categorized responses by the five categories we described. We do this by subscale. We also display consistency scores for each student. We follow this with a description of the results emerging from our interview data with the four students, two from the first course (Genevieve, Lily) and two from the second (Josie, Michaela).

Students' Epistemic Positioning

Before laying out the results, it might be useful to have more context and background on the 18 students. Figure 2 provides a summary of several aspects of this background. Fifteen of the 18 had declared history as their major field. Typically, in their sophomore or junior year at this university, history majors take an initial research methods course in which they learn how to conduct historical research, what tools are required, by what general disciplinary criteria they are applied, and how to construct a

short historical account (thesis/argument, evidentiary claims, citations) based on a question and some investigations into that question. Twelve of the 18 had taken this course or were taking it concurrently. Being sophomores and juniors, 13 (72%) were in the middle of their collegiate experience. Two students—Lily and Hannah—were declared education majors with strong interests in history. Xavier, a geography major, was the only student who came to the course from outside history and/or education. All of the students were of European-American descent except Genevieve, who was Asian American, Lily, who was African American, and Adam, who was Pakistani American. Students choose their own pseudonyms.

Figure 2. Background Data on the 18 College Students

Class 1 (n = 11)				Class 2 (n = 7)			
Name*	Major	Level	Research Methods	Name*	Major	Level	Research Methods
Genevieve**	History	Senior	Yes	Josie*	History	Junior	Yes
Lily**	Educ	Fresh	No	Michaela*	History	Junior	Yes
Brittney	Hist/Educ	Soph	Yes	Adam	History	Soph	Yes
Lolly	Hist/Educ	Junior	Yes	Lyla	Hist/Educ	Junior	Yes
Xavier	Geography	Senior	No	Katie	History	Fresh	No
Rizza	History	Soph	No	Nesa	History	Soph	No
Alan	Govt/Hist	Junior	Yes	Jaya	History	Soph	Yes
Hannah	Educ	Fresh	No				
Bob	History	Junior	Yes				
Jacoby	History	Junior	Yes				
Derick	History	Soph	Yes				

Totals = 2 Seniors, 7 Juniors, 6 Sophomores, 3 Freshmen

* All names are pseudonyms

**Cases researched in more depth.

Table 1 portrays the results of analyses of the students' responses to the two administrations of the BHQ items by category and subscale, indicates comparative consistency scores, and shows the codings of the students' epistemic stances relative to the high bar we had set. BHQ items that sampled stances in a particular category are shown in parentheses at the top of each column under the category abbreviation. The number following each student's name represents either the pre-course BHQ administration (1) results or the post-course results (2).

Overall, more than 75% of the students began in an epistemic transitional phase

and remained in one despite their course experiences. Based on analyzing weighted score changes, a few students (e.g., Rizza, Bob, Josie, Lyla) appeared to sort out some epistemic issues in the direction of becoming more criterialist in their

Table 1. Weighted Scores for Epistemic Categories, Consistency Scores, and Codings by Student and Class

Student Class 1	History Items				History T&L Items				Consistency Score
	Criteria- lism (3,11,13, 18,21)	Objec- tivism (5,16,19)	Subject- ivism (2,8,12, 14)	Coding	Criteria- lism (1,7,15, 17)	Objec- tivism (9,20)	Subject- ivism (4,6,10)	Coding	
Genev. 1	+2.7	-2.7	+1	TR2	+2.75	+1	-5	TR1	77%
Genev. 2	+2.0	-1.0	+1.2	TR2	+3.0	0	+6.7	TR2	64%
Lily 1	+2.2	-1.3	-1.4	TR2	+1.5	-2.0	-1.0	TR2	86%
Lily 2	+1.8	-1.0	-2	TR2	+1.8	-2.5	-6.7	TR2*	82%
Brittn. 1	+1.6	0	+4	TR1	+1.75	+1.0	-1.67	TR1	65%
Brittn. 2	+2.4	-6.7	+1.0	TR2	+3.0	-2.5	+1.0	TR2	80%
Lolly 1	+1.0	-3.3	-6.0	TR2	+1.75	+1.0	0	TR1	71%
Lolly 2	+1.4	-6.7	-2.0	TR2	+2.5	0	-1.0	TR2	77%
Xavier 1	+1.0	0	+2.0	Subj.	+1.25	0	-1.0	TR1	55%
Xavier 2	+2.6	+1.33	-2.0	TR1	+2.75	+1.0	-3.3	TR1	64%
Rizza 1	+8.0	-6.7	+4.0	TR1	+1.0	-2.5	+1.33	Subj.	60%
Rizza 2	+1.0	-2.67	-8.0	TR2	+2.5	-2.5	+6.7	TR2	90%
Alan 1	+2.2	-1.67	-1.2	TR2	+1.0	-2.0	-1.67	TR2	86%
Alan 2	+2.2	-2.33	0	TR2	+2.5	-3.0	-2.0	TR2*	86%
Hanna.1	+2.0	+1.33	+8.0	TR1	+2.0	+2.0	+1.33	TR1	50%
Hanna.2	+1.8	-3.3	+1.2	TR2	+2.75	+1.0	+1.0	TR1	59%
Bob 1	+1.6	-2.33	-2.0	TR2	+1.0	-2.5	-2.0	TR2	95%
Bob 2	+1.6	-2.67	-2.2	WeakCr iter- ialist?	+1.0	-2.5	-2.67	WeakCr iter- ialist?	95%
Jacoby1	+1.4	-3.3	-2.2	TR2	+7.5	-5	-2.0	TR2	86%
Jacoby2	+1.6	-1.0	-2.2	TR2	+1.75	-3.0	-1.67	TR2	77%
Derick 1	+1.4	-7.5	-2.0	TR2	+1.25	-2.5	-2.0	TR2	86%
Derick 2	+2.2	-2.0	-1.8	TR2	+1.5	-1.5	-1.33	TR2	86%

Class2	Criteria- lism (3,11,13, 18,21)	Objec- tivism (5,16,19)	Subject- ivism (2,8,12, 14)	Coding	Criteria- lism (1,7,15, 17)	Objec- tivism (9,20)	Subject- ivism (4,6,10)	Coding	Consis- tency Score
Josie 1	+2.0	-1.33	-2.2	WeakCr iter- ialist?	+2.5	-2.0	-1.0	WeakCr iter- ialist?	91%
Josie 2	+3.0	-2.0	-1.2	ModerateCriter- ialist	+2.75	-3.0	-.67	ModerateCriter- ialist	86%
Micha. 1	+1.6	-1.33	-1.0	TR2	+2.0	-2.0	-.67	TR2	86%
Micha. 2	+1.4	-1.33	-.80	TR2	+2.0	-2.0	-.67	TR2	82%
Adam 1	+1.4	+3.33	+2.20	TR1	+2.5	+2.0	+2.33	TR1	55%
Adam 2	+2.0	0	-.20	TR2	+2.5	-2.5	-1.0	TR2	73%
Lyla 1	+1.6	-2.0	-.80	TR2	+1.25	-2.0	-.33	TR2	73%
Lyla 2	+2.6	-2.33	-2.2	Criter- ialist	+1.5	-2.5	-1.33	WeakCr iter- ialist	86%
Katie 1	+1.2	-.33	-.4	TR2	+7.75	-1.5	-.33	TR2	68%
Katie 2	+2.0	+1.0	-.2	TR1	+1.75	-2.0	+3.33	TR2	68%
Nesa 1	+2.0	+3.33	-1.0	TR1	+1.75	0	-.33	TR1	73%
Nesa 2	+1.6	-.33	-.20	TR2	+2.0	-1.0	-.67	TR2	73%
Jaya 1	+1.8	-.67	-1.2	TR2	+1.75	-2.0	-1.33	TR2	91%
Jaya 2	+1.6	0	-1.2	TR2	+1.0	-2.0	-.67	TR2	77%

TR1 or TR2 represents one of the transitional categories. We took to calling these students wobblers. TR2* = Possibly a very weak criterialist. EBCr? = Likely a weak criterialist, yet the scores are not fully beyond the high bars set despite approaching them closely.

leanings, while others remained more perplexed about their epistemic positionings.

However, another way of representing the data reveal a pattern that show the course did help move students generally toward adjusting their stances away from positions that created impasses for them and towards stronger criterialist orientations. If a goal of the course was—in BHQ terms—to increase positive scores on criterialist items and increase negative scores on objectivist and subjectivist items as proxies for epistemic belief shifts, then we can display scores in this way by looking across Table 1 for such

examples and counting the difference between pre-course to post-course in each category. Furthermore, we can invert this method by comparing how many reductions there were in ambivalent (i.e., average at zero) and positive responses to objectivist and subjectivist items from pre- to post-course BHQ administrations as well as how many negative scores appeared on criterialist items from pre to post. Table 2 shows these two different frequency relationships.

Table 2. Increases and Decreases in Scores on the Three Categories from Pre- to Post-Course BHQ Administrations (both subscales)

	Pre-Course BHQ Number of student cases	Post-Course BHQ Number of student cases	Total Change	Direction of Epistemic Change
High-bar ($\geq +2.5$) Criter. Scores	1	6	+5	Increase toward course goal
High-bar (> -2.0) Object. Scores	3	9	+6	Increase toward course goal
High-bar (> -2.0) Subject. Scores	2	3	+1	Increase toward course goal
Totals	6	18	+11	
Pluses or Zeroes Object. Scores	6	7	+1	Increase away from course goal
Pluses or Zeroes Subject. Scores	6	6	No Change	No reduction toward course goal
Minuses or Zeroes Criter. Scores	0	0	No change	
Totals	12	13	+1	

The patterns here suggest that the course did have some influence in moving students away from objectivist and subjectivist beliefs that tended to create cognitive impasses for them as they attempted to understand history and how it might best be taught, but in somewhat unpredictable ways. For example, of the six students who had high-bar criterialism, objectivism, and subjectivism scores on BHQ 1, three maintained or raised their scores by BHQ 2 while the other three had scores that dropped below the high bar. It is also clear that about a third of the students remained tethered to some degree to either objectivist or subjectivist types of beliefs (although not both simultaneously except Hannah and Katie), albeit perhaps less naïve ones than when they

entered the course experience. Teacher Danielle's difficulty with the "bias problem" no doubt was troublesome for these students as well. For them it seemed that history remained subjectively, and perhaps perversely, interpretive in a way that made them pine for a more objectivity to solve for the difficulty. Yet, the course appeared to hold little power for helping them develop tools that could secure it. Like Danielle, they remained mostly either epistemic dualists or wobbling about in a transitional phase.

In attempting to understand the past, perspective's influence is indeed ubiquitous and inescapable. Learning tools and building criteria to manage its influence can be a difficult undertaking. Even professional history investigators, who can be thought of as expert thinkers and tool and criteria wielders, wrestle with what to do with it and argue among themselves about the proper relationship between the knower and what she can know about the past (e.g., DAVIDSON and LYTLE, 1992; DAVIS, 1988; FINLAY, 1988; MEGILL, 2007; NOVICK, 1988).

A third approach to representing these data is to go on a case-by-case basis through the BHQ scores represented in Table 1 in an effort to identify how many students demonstrated a clear pattern of growth in criterialist scores while simultaneously increasing their negative scores on objectivist and subjectivist items. The consistency score is a gauge of such a pattern.

No student demonstrated 100% consistency. However, several students approached it, Lolly, for example. Only her subjectivist score on the History subscale moves in the opposite direction than the course experiences were designed to steer it, and then only very slightly. Rizza is another example. Her scores all move in the direction hoped, except that her objectivism on the HTL subscale stays the same (although a strong negative score as intended) and her subjectivist scores on the same subscale are attenuated slightly while still remaining positive. Alan is a third such case. The only discrepancy in the history pattern is that, on the H subscale, his subjectivist score moves from a negative position to an ambivalent one. He seems to be saying here that he is not sure what to believe. History can be both more or less subjective, but how much and how often he is not sure and he is not certain he has the criteria to know the difference. He may also be saying that he is comfortable with that ambivalence. However, it could

create impasses in his thinking as he wrestles with the past's residue.

Bob is perhaps the closest example of showing movement in beliefs in the directions intended and with consistency. He begins with reasonably consistent criterialist beliefs and then his pattern indicates that his position strengthens somewhat. However, like Rizza, he has several scores that remain unchanged, suggesting that the course did not have much impact on him regarding those beliefs. Josie's pattern is virtually identical to Bob's. We say more about her case momentarily. It may be that the course had little epistemic-change value for those entering it who already held somewhat consistent epistemic stances that were tied to how they experienced the course and understood its goal frameworks. For example, the half of the students ($n = 9$) who had the highest initial consistency scores (ranging from 77 to 95%) saw no increases in those scores (See Table 3).

Consistency of epistemic position—common among domain experts (e.g.,

Table 3. Comparison of Score Changes for Students with Low and High Initial Consistency

Low Initial Consistency (n=9)				High Initial Consistency (n=9)			
Student	Level	Initial/Endpoint	Difference	Student	Level	Initial/Endpoint	Difference
Rizza	Soph	60/90	+30	Jaya*	Soph	91/77	-14
Adam*	Soph	55/73	+18	Genevieve*	Senior	77/64	-13
Brittney*	Soph	65/80	+15	Jacoby*	Junior	86/77	-9
Lyla*	Junior	73/86	+13	Josie*	Junior	91/86	-5
Xavier**	Senior	55/64	+9	Micheala*	Junior	86/82	-4
Hannah	Fresh	50/59	+9	Lily	Fresh	86/82	-4
Lolly*	Junior	71/77	+6	Derick*	Junior	86/86	0
Nesa	Soph	73/73	0	Alan*	Junior	86/86	0
Katie	Fresh	68/68	0	Bob*	Junior	95/95	0

* Those students who had completed at least one history research methods course or were taking one concurrently.

** Geography major.

Totals:

0 = Decreased consistency

2 = No change

7 = Increased consistency

Totals:

6 = Decreased consistency

3 = No change

0 = Increased consistency

MAGGIONI et al., 2009)—remains a highly salient feature of efforts to identify movement

among the students from course entry to exit. Overall, a striking pattern of two halves emerged. That is, those nine students with the lowest initial consistency saw the greatest increases towards more stabilized positions, while those nine with the highest initial consistency saw it either decrease or remain the same (Table 3).

We would argue that the course appeared to assist the nine with lower initial consistency scores in clarifying aspects of their epistemic beliefs in ways that helped them begin to stabilize positions in the direction of criterialism without necessarily helping them become full-fledged criterialists. Rizza (+30%), Adam (+18%), Brittney (+15%), and Lyla (+13%) are strong cases in point. Brittney, for example, noted in writing at the end of her responses to changes from BHQ 1 to BHQ 2 that the course had a profound effect on her rethinking of and clarifying around the underpinnings of her epistemic beliefs about both history and history teaching and learning. Hannah, on the other hand, continued to suffer from considerable epistemic confusion and instability, despite seeing her consistency improve by nine percentage points. Hannah's consistency was the lowest of any of the 18 students both at the beginning and at the end of the course (50/59). Her written comments at the end of BHQ 2 reflected this confusion, but she did say that the course helped her get clearer about a few matters related to her initial over-reliance on the belief that history was what *actually* happened. Two contributing factors may have been her freshman status and that she was a declared education major, and therefore had not been exposed to history as a disciplinary domain, say, relative to junior history majors, Bob and Josie.

For the more initially-consistent nine, the course either had no criterialist impact or apparently succeeded in destabilizing beliefs. Many of these nine came into the course in transition and left in transition. It is possible that the course may have created awareness around taken-for-granted or unexamined epistemic assumptions that caused re-examination and thus reduced consistency. Bob, whose consistency remained at 95%, is an exception here; he was reasonably confident in his criterialist beliefs coming into the course, and left with that confidence intact. Jaya was the most notable example of the trend among those whose consistency decreased. In analyzing her drop from 91% consistency to 77% (-14), we theorized that, based on her occasional oral in-class

participation and responses to course activities, she came into the course reasonably astute at selecting socially-desirable—but not yet fully self-analyzed—responses to BHQ items, accounting for her initial high consistency. However, the course provoked her to question her beliefs in ways that upon seeing BHQ 2, she became more sensitized to those beliefs. This in turn caused her to respond more cautiously to items and map her responses more closely to the transitional (TR2) beliefs she actually held. There could be other ways to interpret Jaya's case, but what we suggest here seemed most plausible to us.

Two other features of this manner of displaying the data are also notable. Of those nine with low initial consistency scores, six were underclassman. Of the high half, only two were. And second, in the low half, only four students had taken or were taking a research methods course in history. All but one of the high-half students had taken or was taking such a course. This may suggest that a combination of more years of collegiate experience (e.g., growth in intellectual maturity) and epistemological questions likely raised in a history research methods course may help to reduce the greater epistemic wobbling that characterizes lower classman and those who had yet to take a such research methods course.

History (H) and History-Teaching-and-Learning (HTL) Subscale Changes

It could be that consistency of a student's epistemic stance regarding history may not need to be coherent with their stance regarding teaching and learning the subject (50% of students had higher criterialist H consistency scores than criterialist HTL scores initially). This might be a function of them gradually learning more about what history is in history courses (especially for those who took history research courses) and as history majors without it necessarily influencing their views of learning and teaching it drawn principally from their apprenticeships of observation in K-12 classrooms. All 18 students had yet to take a formal education course that might have begun to challenge the assumptions they held about what it means to teach history.

Overall, the pattern of change in criterialist scores on both H and HTL subscales

was generally up from BHQ 1 to 2. Specifically, of the 18, 10 students' (56%) criterialist weighted scores went up on H items, and 14 (78%) on HTL items. Three scores remained unchanged on H items and three on HTL items. Five scores (28%) fell on the former and only one (6%) on the latter. Jaya was the only student to have criterialist weighted scores drop in each category from BHQ 1 to BHQ 2. As we observed, by the time she saw BHQ 2, she likely had become more self-aware of her beliefs in ways that caused her to study items more carefully and adjust responses to achieve some alignment. For example, her agreement on item 21 (history is a reasonable reconstruction of past occurrences based on available evidence) fell by one point (5 to 4) and she explained this by noting that she was put off by the term reasonable. She noted, "...not all of history is necessarily reasonable or makes sense." This could have been a response to course stress on the idea that one could distinguish between historical accounts that were effectively nothing more than groundless opinions and accounts that were heavily supported by evidence and therefore more solid and acceptable as claims.

Commitments to objectivism in History subscale dropped for 14 students (78%) and rose for 3 (17%), while one (Michaela) registered no change. Objectivist HTL subscale scores dropped for 14 students (78%), one person's (Xavier) score rose, and four (22%) remained unchanged from pre to post. Overall, there was slightly less movement in the unintended direction on the HTL subscale, a likely consequence of the course's focus on history teaching and learning and specifically on the problems and impasses associated with over-stressing the objectivist nature of history (e.g., that a right answer is always within reach) when teaching the subject. Epistemic commitments to subjectivist items on the H subscale fell for five students (28%), but rose for 11 students (61%). Two students were unchanged in their responses from pre to post. On the HTL subscale subjectivist-item agreement decreased for six students (33%) and increased for 11 students (61%), while only one student's score (Michaela) remained unchanged. As with Josie, we say more about her case momentarily.

Four Brief Case Examples

Genevieve. At the end of the course, we categorized Genevieve, an Asian-American history and museum studies senior in the second transition (TR2), although she remained in agreement with subjectivism on both the H and HTL subscales and her levels of agreement actually rose from BHQ 1 to BHQ 2, while her H subscale agreement scores dropped. She also had moderately weak consistency scores that dropped by BHQ 2. We wondered if she might be better categorized as in the first transitional state. Yet, her comments and interview data showed some integration of the object and subject positions and beliefs about history being an interpretive enterprise heavily involving the investigator in interactions with accounts.

With regard to BHQ item 11, for example, she noted that she was confused by the statement, “history is a critical inquiry into the past” initially, but after BHQ 2, she said, “...I have a better idea how history works and how critical thinking can come from a number of different perspectives, which does in fact make history a critical inquiry into the past. It’s a matter of asking questions.” With regard to constructing reasonable accounts based on evidence (BHQ #18), she observed, “It is possible that a more accurate account can be constructed in the presence of conflicting evidence because then there is an acknowledgement [by the investigator] that there is more than one side to the story” (her emphasis).

Finally, with regard to facts speaking for themselves (#16), she argued, “The facts *don’t* speak for themselves because there are so many ‘facts’ in every story. You have to *interpret* the facts” (her emphases). All of her remarks imply or state directly the presence of the knower (investigator) interacting with what is attempted to be known (*residua*), suggesting ongoing epistemic effort at successfully resolving and coordinating that relationship, rather than resignation or lament in its face. That she leaned toward growing agreement with a subjectivist stance is not necessarily surprising given her epistemic wobbling. Her interview data showed that she was still trying to sort out the proper role, tools, and criteria investigators assume and rely on as they interpret the past’s residue. Bracketing subjectivism in doing so was not something she had entirely

accomplished.

Lily. A freshman education major and second-generation African American, Lily was also in epistemic transition (TR2), although her overall criterialist weighted scores showed less than straight agreement. Her consistency scores were reasonably strong, but fell below the high bar we had set for description as a criterialist. Like Genevieve, Lily seemed to be struggling to coordinate the relationship between the knower and what could be known about the past. With regard to interpretations of the past being linked to a lack of evidence (item 5), Lily registered strong disagreement on BHQ 2. She observed, “Evidence is in the eye of the beholder. You could think something is evidence and someone else could think it inconsequential... that’s what I was thinking about.” Initially Lily held strong agreement with the idea that history was a critical inquiry into the past. By BHQ 2, that agreement had attenuated. To explain the shift, she said, “Sometimes its someone using history in their [sic] words to brainwash someone about an event. You know, to this day, people say that [the Holocaust] did not happen.” This issue had been discussed on at least two occasions in class. Her explanations show her wrestling with the knower’s role as she attempts to make sense of the past. She remains uncertain, for example, about how to separate “brainwashing” efforts from defensible histories, yet knowing how evidence is used matters.

Lily did suggest the she held some nascent ideas about criteria and tools for managing this problematic epistemic space. In responding to her shift from agreement to disagreement with the statement, “the past is what the historian makes it to be,” she argued,

I was thinking that if you only look at... and read the book, you can only get what the historian wants you to get from it. But these history books get their information from somewhere... if you only allow your opinion to be based on someone else’s without researching it yourself —you know, you could read a book about one period in history and if you only read that one book, that’s the opinion you are going to have. But then if you go and research it and say, this person says this and this person says that, then you can think what do I think, and you can come up with a synthesis, or you can say that you don’t agree with either of them.

Here she notes efforts to coordinate the role of the knower with what can be

known from the past's objects and implicates a research process for aiding that coordination, suggesting the idea of evidence preponderance in forming Kloppenberg's (1989) idea of a provisional synthesis. However, she sheds little light on what the process looks like or how it might work to help her settle disputes. The limited sense of a fully productive position for evaluating and arbitrating knowledge claims was common to these students, especially those who had yet to take a historical research methods course.

Josie. She was a European-American junior history major who had been home schooled, attended a local community college for two years, and then transferred to the university. Her home schooling had featured a program that was literature based, integrating most of all of the subjects she learned about with literature selections. It was difficult to trace out the influence of that home-schooling curriculum on her ideas and epistemic beliefs. However, she was remarkably consistent in her epistemic stance (second only to Bob) with virtually maximum weighted scores on criterialist items on the second BHQ. She also bore out the criterialist pattern by displaying consistent disagreement with objectivist and subjectivist items. We thought of her as perhaps ending as the only moderate criterialist among the 18 students. Josie noted that she had benefited from the history research course she had taken in her sophomore year, remarking that, "I see the disciplined method of inquiry necessary to *write history*" (her emphasis).

One element that was added to the second version of the course students took involved a more concerted effort to explicitly teach specific criteria and especially strategic historical-analysis procedures and heuristics for dealing with evidence (e.g., the ideas of preponderance and contextualization) and making defensible claims based on it. These additions hinged on learning to identify an account's author, attribute an account to its historical context, assess the perspective and subtexts it might contain, and judge its reliability with respect to other accounts from the period and in lieu of the questions the investigator was asking (cf. VANSLEDRIGHT, 2011). Those strategies resonated particularly with Josie, who was able to integrate them with what she had learned in her history research methods course. She noted, "Learning how to identify perspective—like

we talked about with PAIR^e—is essential to learning how to view/do history.” She also observed, “We can use [firsthand] accounts to interpret a general account as we talked about numerous times.” Here she suggests the evaluative criterion of judging a history by the light of how it uses firsthand accounts to argue its knowledge claims, a practice fairly common in the discipline. Such positioning suggests to us that, of the 18, Josie was epistemically farther along the developmental continuum towards a criterialist stance than her college counterparts, with the possible exception of Bob.

Michaela. A European-American junior history major, who had attended local public schools and had experienced a traditional history curriculum, Michaela showed remarkable stasis in her BHQ scores from pre to post administrations. On the HTL subscale in fact, there was no change. She was the only student for whom this occurred. Her BHQ scores showed weak to moderate agreement with criterialism and generally weak disagreements with objectivism and subjectivism. We interpreted her to be in the second level of transition because her comments suggested that she, like many of her colleagues, was still attempting to work out beliefs that would successfully coordinate the knower/known relationship. Yet, in many ways, she also seemed like a bright but very traditional college student, anxious to get good grades and attain a high GPA while simultaneously still having considerable fun, and then graduating and qualifying for a well-paying job. Most college courses were something to endure along the way. Perhaps as a result, her comments regarding her few changes on BHQ items were unrevealing and her interview articulations shed little additional light.

She was aware that the knower faced a challenge in understanding the past, that impasses were often difficult to overcome, and that the knower needed extra vigilance and sharp judgment in accomplishing syntheses. However, it was unclear whether she had fully established for herself a set of workable criteria and strategic, analytic processes for overcoming cognitive impasses. She could articulate them but often in general terms and without much further specification:

You need to be able to read, and relatively quickly. You need to know how to understand bias, understand what else is going on in the world. [You] need to understand who, what when, where, why questions. [You] need to understand why someone is saying something and how

they [sic] got to the question. ...[T]he knowledge to look into things deeper—critical thinking skills.

She was unlike Josie in this regard and the contrast between these two smart college juniors served as an interesting case comparison of the differences between a moderate criterialist position and someone in transition.

Conclusion

For these college students, epistemic wobbling appeared to be common. Working out a successful coordination between themselves as knowers and what can be known about the past through its remaining objects is a difficult feat. But we would argue it is a necessary one: Being able to think historically and do history depend upon developing something that resembles what we are describing as criterialism (or what Kloppenberg calls a pragmatic hermeneutics). Over-reliance on trusting objects from the past to deliver their stories in an unmediated and unproblematic way is not possible. Nor does an over-reliance on knower subjectivity solve the issue of how to more deeply make sense of the past.

If we accept the premise that to work out a successful coordinated epistemic position requires, in part, experiences that provide opportunities to practice doing history and engaging in difficult aspects of historical thinking, then more such experiences would be better than fewer. During these experiences, it also would appear to make sense for learners to develop a vocabulary for describing their efforts. This would allow them to be more aware of how their epistemic positionings change and enable them possess more control over moving forward productively. Experiences in history departments (research methods courses) and in teacher preparation programs are implicated by the outcomes of this study.

It is important to note the limitations of this work. This was an exploratory study done with limited data-collection resources. We were unable to conduct verbal report protocols on how students responded to the two administrations of the BHQ. Therefore, we relied on participants' self-reports about the nature of their epistemic changes from

pre to post, and those reports can be somewhat unreliable since participants often had difficulty articulating changes in taken-for-granted epistemic assumptions. As a result, how wobbling and shifting occurred, under what circumstances, and related to which specific course experiences is based partially on our inferential estimates.

Although we believe the data obtained from the BHQ instrument are valuable and revealing, what they tell us is less than precise. More extensive data collection efforts would likely be necessary to offset a reliance on making high-inference interpretations. As noted, verbal reports might be necessary. More extensive interviewing with additional participants would also help. The latter could be used more effectively to pinpoint specific course experiences that assisted in inducing epistemic changes and reducing those that produced fewer impacts. However, doing exploratory studies can clarify what work remains.

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Appendix

Beliefs about History Questionnaire List of Statements

1. It is fundamental that students are taught to support their reasoning with evidence.
2. History is simply a matter of interpretation.
3. A historical account is the product of a disciplined method of inquiry.
4. Students who read many history books learn that the past is what the historian makes it to be.
5. Disagreement about the same event in the past is always due to lack of evidence.
6. Good students know that history is basically a matter of opinion.
7. Students need to be taught to deal with conflicting evidence.
8. Historical claims cannot be justified, since they are simply a matter of interpretation.

9. Good general reading and comprehension skills are enough to learn history well.
10. Since there is no way to know what really happened in the past, students can believe whatever story they choose.
11. History is a critical inquiry about the past.
12. The past is what the historian makes it to be.
13. Comparing sources and understanding author perspective are essential components of the process of learning history.
14. It is impossible to know anything for sure about the past, since no one of us was there.
15. Knowledge of the historical method is fundamental for historians and students alike.
16. The facts speak for themselves.
17. Students need to be aware that history is essentially a matter of interpretation.
18. Reasonable accounts can be constructed even in the presence of conflicting evidence.
19. Even eyewitnesses do not always agree with each other, so there is no way to know what happened.
20. Teachers should not question students' historical opinions, only check that they know the facts.
21. History is the reasonable reconstruction of past occurrences based on the available evidence.
22. There is no evidence in history.

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