A symposium at EARLI 2017

**Diverse methodologies for investigating and supporting the development of historical reasoning**

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**Abstract**

This symposium aims at strengthening the theoretical and methodological groundings of investigations that target the development of historical reasoning and related instructional practices. Research on this topic touches on multiple scholarly literatures, including the philosophy and theory of history, history didactics, educational psychology, the learning sciences, and history education. More thorough exchanges of ideas among all these areas would be fruitful. Despite sharing many common overall goals, scholars in these fields employ diverse theoretical and methodological frameworks, and these differences have seldom been explicitly explored and discussed. In this symposium, we will bring these issues to the front by inviting the authors to openly describe and discuss the benefits and drawbacks of their selected theoretical frameworks and associated methodologies, with the intention of promoting increased coherence and collaboration within the field, while also making room for innovative openings. The presentations will be discussed by a philosopher of historiography, who is invited to approach the matter by pondering on ways to start bridging philosophical work and experimental research within this domain. In terms of educational relevance, the presentations offer a variability of methods for investigating both secondary and university students' reasoning and thus modifying teaching practices accordingly.

**Historians' epistemic aims: interviewing experts**

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**Abstract**

Despite the vast amount of research on philosophy and theory of history, and the growing interest in training students to work with historical sources and historiography as historians do, there is still relatively little empirical evidence on historians' epistemic authority. Thus, the present study targets professional historians' considerations of the *epistemic aims* of their work.  It is positioned at the intersection of historical theory, expertise research, and research on epistemic cognition. Twenty-six academic historians were interviewed about their work practices and understanding of historical research. Preliminary analysis of four historians' interviews allowed the identification of considerable between-respondent variety in four different respects: type of end products, agency, source, and structure of epistemic aims. The theoretical triangulation of epistemic cognition, expertise research and historical theory will add to current understanding of the nature of expertise in this multifaceted domain and provide tools for planning further studies on experts' historical reasoning. Our findings also provide insights into ways to support novices' development in this respect. By detailing historians' situated aims systematically these results contribute significantly to future work on historical theory and education.

**Extended summary**

**Background**

There has been growing interest in history education for document-based pedagogical practices, in which students are encouraged to investigate historical sources and historiography in a way similar to historians' practices (e.g., Reisman, 2012). However, these methods seem to face a major challenge apropos epistemological research of historiography: there is still little empirical evidence about how professional historians actually reason (see Shanahan, Shanahan, & Misischia, 2011; Wineburg, 1998). Accordingly, there is a need for more elaborate and multidisciplinary research on expertise in history (Virta, Puurtinen, & Pihlainen, 2016). Thus, we situate our work in the intersection of three research traditions.

First, *historical theory* is a field of enquiry that "assists our understanding of what kind of knowledge we can have of the past, and precisely how that knowledge is constructed, assembled, and presented" (Partner, 2013, p.1). While highly relevant to understanding historical reasoning (see Limón, 2002), it has too often had to rely on authored accounts when analyzing the production, presentation and reception of historical knowledge. As Kuukkanen (2015) has argued, studying the cognitive justification of historical

research calls for empirical studies on the actual processes of historical reasoning directly in practice. Second, *expertise research* has been productive in explaining the reasoning of specialists of certain domains, but history has been addressed somewhat scarcely (Voss & Wiley, 2006; see also Shanahan et al., 2011; Wineburg, 1998). Third, research on *epistemic cognition* has emphasized new aspects, such as epistemic aims and values, and it has been proposed that engaging with theory and philosophy of history could expand and improve educational research (Chinn & Rinehart, 2016). This work, however, has yet to be implemented into the domain of history. In sum, several research traditions address what we think are important issues when studying expert historical reasoning, but these rarely seem to communicate.

**Aim**

We aim to bring these traditions closer together by targeting the epistemic aims historians hold in their practice. Along with the AIR model of epistemic cognition (Chinn & Rinehart, 2016), we include as epistemic aims knowledge, belief, truth, and narrative, among others, and ask *what historians consider as the epistemic or non-epistemic aims of their work* in both current research projects and the field of historical research in general.

**Method**

Greene and Yu (2014) advocated interviews as a method for mapping the epistemic cognition of academic experts. Thus, we conducted a series of semi-structured interviews with 26 Finnish academic historians about their work practices and understanding of historical research. Questions were built around the theoretical framework presented above, and included, among other topics, situated items about decision-making in the historians' current and previous research projects when setting aims or when confronted with surprising situations or methodological choices. Interviews lasted on average 90 minutes. Historians' narrations were analyzed through qualitative content analysis focusing on epistemic aims.

**Findings**

Preliminary analyses of four historians' interviews identified considerable between-respondent variety on four different respects. Although none of the historians explicitly named "truth" as an epistemic aim, the *end products* included knowledge, understanding, explanation, thought, consciousness, and answers to questions. Epistemic aims also differed in three other respects, namely, the *agency* they were attached to (e.g., improving one's own understanding of a topic, increasing people's consciousness), *source* (e.g., aims given by a project, aims derived from personal beliefs), and *structure* (e.g., one or several separate aims, hierarchically connected aims). Many epistemic aims were connected to, or understood as, ethical responsibilities. Some historians' also indicated non-epistemic aims such as simply getting one's work done. These preliminary observations will be re-assessed when analyzing the whole data set.

**Implications**

Our theoretical triangulation will hopefully add to current understanding on the nature of expertise in this multifaceted domain. This may, in turn, provide tools for planning further studies on experts' historical reasoning as well as on ways to support novices' development in this respect. Methodologically, the

interviews were successful in activating participants' self-reflectivity; in intimate, one-on-one discussions, the participants "spoke out" their views in ways that they most likely would (or could) not do in, say, printed autobiographies or scientific work. However, this approach has its limitations, too, such as the limited selection of participants, or fear of "failure", when being interviewed as a representative of domain experts. Regardless of such limitations, these results significantly contribute to future work on historical theory and education.

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**Reading, reasoning, and writing like a historian: what concurrent think-alouds reveal**

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## Abstract

Historical essays that rely on students' use of historical source documents have been a dominant means of assessing the presence and quality of high school students' historical reasoning. However, a written essay combines demands of historical reasoning, often based on documents that must be read, with rhetorical demands of writing an organized narrative or evidence-based argument about an historical event or issue. This study uses a concurrent think-aloud methodology in a case study design to examine students' historical reasoning in the context of a document-based historical essay task. Think-aloud protocols were analyzed for evidence of how students were processing the sources, their reasoning about them, ways in which they reflected historical reading and inquiry reasoning, and the relationship of these to the final written product. Of particular interest were ways in which the written essay product failed to capture historical inquiry processes evident in students' reading and reasoning processes.

## Extended summary

### Aims

Empirical research into how adolescents learn to read, reason, and write history has focused largely on written products, especially essays written from historical sources (De la Paz, 2005; Monte-Sano, 2010). In a departure from the emphasis on the written product and consistent with earlier work that characterized inquiry processes in historians and in college students (Perfetti, Britt, & Georgi, 1995; Wineburg, 1991), the present study used concurrent think-aloud methods to explore the history reading, reasoning, and writing processes that lead to a written essay product. The study thus extends the extant research on writing in history through an investigation of both the historical writing a student produces and the historical reasoning the student engaged in to create that product. Specifically, the concurrent think-aloud methodology enabled the present research to investigate the processes of historical reasoning that occur when reading historical sources to accomplish a historical writing task. Of particular interest from a research methodology perspective are issues related to the completeness with which a written product can reflect the historical reasoning and reading processes that went into producing it.

### Theoretical Framework

Advocates of history education reform advocate for an inquiry-based approach to the teaching and learning of history (Shanahan & Shanahan, 2008; Wineburg, 2001). The call is for students to practice historical inquiry through reading and reasoning with artifacts that comprise the historical record, often document sources. Studies of adolescents' competencies in historical inquiry processes are often studied

through written essays they produce based on a set of source documents provided to them. Thus, the essays provide the evidence base for researchers' claims about adolescents' historical reasoning (De La Paz, 2005; Monte-Sano, 2010; Monte-Sano & De La Paz, 2012). However, unclear is whether and to what extent written historical essays produced provide accurate or representative windows into students' historical reasoning and reading. Furthermore, efforts to assess the impact of instruction designed to improve students' historical reading and reasoning often rely on written products generated pre and post instruction. A persistent challenge in interpreting this body of research is the paucity of empirical evidence elucidating the validity of inferences drawn about historical reading and reasoning processes based solely on the written products of those efforts.

**Methods**

This study is situated within a year-long intervention designed to promote students' historical reasoning and inquiry in a 11th grade U.S. history course located in a school in the midwestern United States. Concurrent think-aloud sessions were conducted with 9 participants as they completed a task that required students to read multiple sources and compose a source-based history essay.

Video data of the sessions were transcribed, and these transcripts were segmented and then coded for reading, historical reasoning, and writing processes. Students' essays were coded similarly for evidence of historical reasoning and use of sources. A comparative analysis of historical reasoning processes inferred from the protocols versus those inferred from the written essays elucidated the ways in which essays accurately and completely reflected students' historical thinking. This presentation focuses on the data from two participants selected as illustrative cases of the affordances of concurrent think-aloud methods.

**Findings**

Analysis of protocol data shows two approaches that participants employ to complete the writing task. In most cases, participants approached the task by reading the prompt and the sources, and then compiling a thesis based on their emergent reasoning about the sources. In other cases, participants read the prompt and sources but then proceeded to engage in prewriting activities (e.g., outlining, notetaking) prior to writing the essay. The protocols reveal that participants who engaged in prewriting activities corroborated within and across sources, attended to authors' perspectives, audience, and purpose (sourcing and perspective taking) during prewriting. Overall, the protocols highlight a tension between participants' reasoning with historical sources, which they did quite well during and after reading, and figuring out how they could use it in their essays.

The data indicate that concurrent think-alouds can uncover the kinds of cues that students use to revisit sources, what in those sources they consult, and how the perusals and rereading of different sources do and do not contribute to identifying perspectives of the authors and actors in historical events. Furthermore, think-alouds can indicate how perspective information impacts interpretation of the information in a source, comparisons across perspectives and inferred relations among information from different perspectives.

**Implications**

The utilization of concurrent think-aloud methods while students engage in historical writing tasks can unveil and more deeply characterize the nature of students' historical reasoning. This study has important implications for both the ways in which researchers make claims about students' historical reasoning, as well as the ways in which teacher's assess students' historical reasoning in classroom contexts.

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**Formative assessment of historical causal reasoning: development of a theory-driven cognition model**

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**Abstract**

As history education has changed from memorization to emphasize historical thinking and formative assessment has emerged as an alternative approach to summative testing in secondary education, new assessment practices are needed. The design of assessment should be grounded on models of cognition that detail the goals of learning within a specific domain or an aspect thereof. In this paper we present a theory-informed model of cognition for historical causal reasoning as a part of historical thinking. Its primary use is as a reference tool to inform teachers on instruction and curriculum choices and students on the required knowledge, beliefs and skills they should develop in order to become better causal thinkers in history. The creation of this model was based on relevant literature in the fields of historical theory and history education. Subsequently, our model was submitted to two expert panels consisting of historians, educational researchers and history teachers in secondary education. Their feedback was then used to further develop the model. This approach resulted in a staged progression of three separate but intertwined dimensions of beliefs and knowledge and associated student behavior: an epistemic dimension, a fist-order knowledge dimension and a second-order knowledge dimension. The next step is to design formative assessment tasks that can measure (aspects of) historical causal reasoning based on our model. The design and testing of these tasks forms the subject of our current studies.

**Extended Summary**

**Background**

The emphasis of history education has changed. While its focus used to be on memorization it is now more concerned with disciplinary historical thinking abilities such as critiquing sources, describing continuity and change and historical causation (van Drie & van Boxtel, 2008; Lévèsque, 2008). However, in practice, assessment in history classrooms in secondary education is still very much aimed at rote learning and factual recall (Ercikan & Seixas, 2015). While research has shown that, especially formative, assessment can be a potent asset in the classroom (Black & Williams 1998). Assessment practices need changing if they are to reflect the new aims of history education.

**Aim**

According to Pellegrino, Chudowsky and Glaser (2001) three challenges need to be met in the design of assessment. First, a cognition model of learning in a given domain must be defined. Second, tasks that are aimed at uncovering this learning must be designed. Third, the means by which the outcomes of these

tasks may be seen as evidence of learning must be determined. In this study we endeavored to contribute to the first goal by designing a progressive cognition model of causal reasoning in history, i.e. the ability of students to construct and evaluate causes. Historical causation is considered both by historians (Hewitson, 2015) as well as educational researchers (Voss & Wiley, 2006) to be one of the fundamental thinking abilities in the historical discipline.

The following research question guided our investigation: *What constitutes causal reasoning in history and how can we describe the incremental development of student's proficiency in this ability?*

**Method**

In designing our model, the following procedure was used. First, we conducted a literature study historical causal reasoning. We began with seminal studies in this field and then by a process of 'snowballing' gathered more literature to further our understanding of causation. By including both educational and historical-theoretical studies we endeavored to gain insight on both the what (i.e. student behavior) and the why (i.e. the underlying beliefs and knowledge) of historical causal reasoning. A preliminary model of cognition was developed based on this study consisting of three dimensions: epistemological beliefs, second-order knowledge and first-order knowledge. This preliminary model was then submitted to two expert panels, each consisting of historians, secondary school teachers and educational researchers in the field of history, who critiqued the model. In both meetings experts participated in two feedback rounds. In the first round experts were presented with four questions: 1) is the model clear and comprehensible?; 2) are the various stages consistent and logical; 3) is the model representing historical causal reasoning and 4) is the model usable in an educational context? The second round allowed the participants to add feedback that was not covered by the proposed questions. Their feedback was then used to further improve the model.

**Findings**

Our investigation resulted in a staged progression of the three aforementioned knowledge dimensions: epistemological beliefs, second-order knowledge and first-order knowledge. Each dimension consists of four stages and shows knowledge or beliefs on the one hand, and corresponding student behavior on the other.

The epistemic dimension show the various beliefs that individuals can hold with regards to the creation and justification of knowledge. The second-order dimension details an individual's understanding of the concept of causation itself, for instance whether one is aware of multi-causation or employs counterfactual thinking. Finally, the first order knowledge dimension shows the organization of historical knowledge, both in level of abstraction as in time.

**Implications**

The primary goal of this cognition model is to provide educators and researchers with a reference tool detailing what students should know and do with regards to historical causal reasoning that can be used to

develop (formative) assessment tasks. Furthermore, researchers can use the model to investigate how students' historical causal reasoning actually progresses.

In our current studies, we have designed five different formative assessment tasks that focus on different dimensions and aspects of historical causal reasoning. The design of these tasks was informed by the model. Presently, these tasks are being tested in history classrooms in secondary education in the Netherlands. Examples and preliminary results will be included in the paper.

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**Understanding teacher growth in facilitating whole-class text-based discussions in history**

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**Abstract**

The case for classroom discussion as a core method for subject matter learning stands on stable theoretical and empirical ground. Nevertheless, several decades of research on classroom discourse suggest that classroom discussion is exceedingly rare and dominated by teacher-initiated evaluative questions. This study explores how four middle school history teachers who received professional development in a document-based history curriculum develop in their practice of whole-class text-based discussion facilitation over the course of two years. Preliminary analyses reveal that all four teachers grew in their facilitation of text-based, whole-class discussion, albeit from different starting places and along varying trajectories. Although two of the teachers did not engage students in text-based historical discussion in Year 1 of the study, they did at moments in Year 2. We conclude that although deep understanding of the curriculum is not *sufficient* to facilitate disciplinary discussion, it may be a necessary precondition before teachers can demonstrate flexibility and engage in deliberate practice. By exploring teacher development in the complex practice, the study contributes to our understanding of the dispositions and understandings required to support productive disciplinary engagement in history.

**Extended summary**

**Aim**

The case for classroom discussion as a core method for subject matter learning stands on stable theoretical and empirical ground. Sociocultural learning theory posits that classroom discourse socializes students into higher level reasoning processes (Vygotsky, 1981). A body of empirical research suggests that productive classroom discourse can support student engagement and achievement across subject areas (e.g., O'Connor & Michaels, 1996; Reznitskaya et al., 2001). Discussion plays an especially powerful role in history classrooms. Historical analysis requires that readers resist the urge to evaluate the past—as strange or objectionable as it may be—by anachronistic, or present day standards, and enter what Reisman (2015) termed the *historical problem space*. Whole-class text-based discussion affords students an opportunity to reach beyond the familiar and to engage in the sustained, deliberative, textual analysis that is required to enter the historical problem space. Nevertheless, several decades of research on classroom discourse suggest that classroom discussion is exceedingly rare (e.g., Nystrand et al., 2003), and dominated by teacher-initiated evaluative questions (Cazden, 2001). The history classroom, in particular, has been characterized by lecture, recitation and resistance to instructional change (Stodolsky, 1998). This study explores how four middle school history teachers who received professional development in a document-based history curriculum develop in their practice of whole-class text-based discussion facilitation over the course of two years.

**Conceptual Framework**

This study uses the lens of *adaptive expertise* (Bransford et al, 2000; Hatano & Inagaki, 1986) to capture teacher growth in whole-class discussion facilitation of historical texts. We adapt the three analytic categories used by Yoon et al 2016: *flexibility* (in modifying the curriculum in response to students' needs), *deep understanding* (of the purpose of text-based discussion in history), and *deliberate practice* (that identifies, targets, and reflects upon discrete teaching practices that foster discussion). We also consider the role of *feedback* in the development of adaptive expertise (Bransford & Schwartz, 2009).

**Method**

This two-year comparative case study followed four teachers in two middle schools located in a suburban mid-Atlantic county (see Table 1). All four teachers attended 5 full days of professional development in fall 2014. Data collection across both years included videotaped classroom observations (4 in YR1 and 3 in YR2), debrief interviews following each observation, video-recall interviews, artifacts collection, and student focus groups and surveys.

Table 1. Teacher and School Demographics

| Teacher | Gender | Teaching Experience (in YR1) | Grade | School | % White | % Hisp | % Black | % Asian | % ESOL | % Eli-gible FRL | % Students Passing Reading 2015 |
|---------|--------|------------------------------|-------|--------|---------|--------|---------|---------|--------|-----------------|--------------------------------|
| T1 | F | 3 | 6 | A | 7 | 70 | 20 | 6 | 40 | 77 | 63 |
| T2 | F | 2 | 6 | | | | | | | | |
| T3 | F | 7 | 7 | B | 62 | 10 | 8 | 11 | Not Reported | 10 | 88 |
| T4 | M | 10 | 7 | | | | | | | | |

**Findings**

Preliminary analyses reveal a number of compelling findings. First, all four teachers grew in their facilitation of text-based, whole-class discussion, albeit from different starting places and along varying trajectories. The two sixth grade teachers (T1 and T2) engaged in far more disciplinary discussion throughout than the two seventh grade teachers, even though they had less teaching experience, shorter class periods, and their students' reading and language skills were far lower than those of the other two teachers. Although the two 7th grade teachers did not engage students in text-based historical discussion in Year 1 of the study, they did at moments in Year 2. We conclude that although deep understanding of the curriculum is not *sufficient* to facilitate disciplinary discussion, it may be a necessary precondition before teachers can demonstrate flexibility and engage in deliberate practice.

**Implications**

This study is the first to exploration of teacher growth in disciplinary discussions in history. By exploring teacher development in the complex practice, the study contributes to our understanding of the dispositions and understandings required to support productive disciplinary engagement in history.

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