HISTORICAL ENCOUNTERS
A journal of historical consciousness, historical cultures, and history education

ISSN 2203-7543 | Double Blind Peer-Reviewed | Open Access | www.hej-hermes.net

Editorial: Epistemic Cognition in History Education

Martin Nitsche
FHNW School of Education, Switzerland

Christian Mathis
Zurich University of Teacher Education, Switzerland

D. Kevin O'Neill
Simon Fraser University, Canada

CITATION

Nitsche, M., Mathis, C., & O'Neill, D. K. (2022). Epistemic cognition in history education, *Historical Encounters, 9*(1), 1-10. https://doi.org/10.52289/hej9.101

COPYRIGHT

BACKGROUND

This special issue arose out of the symposium "Epistemic Cognition in History—insights into structure and practice" that was held at the 2018 Annual Meeting of the American Educational Research Association (AERA) in New York, organized by the first and third guest editors. In addition, it was inspired by the work of the second guest editor, an associate editor of *Historical Encounters,* who recently published a handbook chapter about epistemic cognition and historical thinking (Mathis & Parkes, 2020). Adapting Hofer's (2016) domain-general understanding, we use the phrase "epistemic cognition in history" to refer broadly to individuals' beliefs, concepts, thinking, and reasoning about knowledge and knowing in the field of history.

Our special issue contributes to the growing body of over 20 studies about epistemic cognition in the field of history education that have been conducted in the last decade, since Maggioni and colleagues published their seminal works involving history teachers, historians, and school students (Maggioni, 2010; Maggioni et al., 2004, 2009; VanSledright & Maggioni, 2016). It seems somewhat surprising that history educators around the globe are engaged in studying the construct in such density at the current moment, given that epistemology is one of the oldest fields of philosophy. In fact, theorists of history such as Ricœur (1984) have linked reflections on historical and epistemic cognition to considerations made by Aristotle in antiquity. Since the

beginning of the nineteenth century, driven by discussions in the natural sciences (see Lorenz, 2011), historians and theorists of history discussed, for example, whether it is possible to (re)present the past as history in the form of narratives, or whether these forms of historical knowledge are objective or uncertain (e.g. Rüsen, 2020; White, 1973). In fact, answers to these questions still seem to be controversial (e.g. Lyon Macfie, 2010; Munslow, 2017). One reason could be that skepticism toward final truths and openness to new insights are considered essential characteristics of democratic epistemologies. This epistemological ambiguity—which is at work not only in history but elsewhere—might in fact be one cause of the current success of populism, as it stands at the heart of whether one assumes that (historical) knowledge is a matter of opinion, or can be justified with evidence and arguments (e.g. Moore et al., 2020). A search for educational ways to address the challenges of populism and fake news may also explain why history educators are currently interested in epistemic cognition.

An additional reason for the interest in epistemic cognition in history is much older. It had been pointed out by Shemilt (1983) that the focus on epistemology ("forms of knowledge") as opposed to the teaching of facts offered the hope that students would be enabled to "make appropriate sense of the past to the extent that they understand the logic, methods, and perspectives peculiar to the discipline" (p. 3). In line with this British approach, most Western history educators of the past four decades stressed that learning to think historically was more important than learning particular historical facts (e.g. Körber & Meyer-Hamme, 2015; van Boxtel & van Drie, 2018). Based on this assumption, they identified essential metahistorical concepts, for example "accounts" or "historical significance" (e.g. Lee & Ashby, 2000; Seixas, 2017), and historical thinking activities, such as "asking historical questions" or "contextualization" (e.g. VanSledright, 2011; Wineburg, 1991a). In this sense, history educators for a long time have sought to conceptualize historical thinking in epistemological terms, and to support it both inside and beyond schools.

Despite this long-term trend, research about the relations between the epistemic and historical cognition of school students and (prospective) history teachers, as well as about the role of epistemic cognition in history teaching, had not been conducted systematically until the beginning of the 21st century. The first insights into the epistemological development of children were found in the longitudinal studies of grade 2 to 8 students of the British CHATA project (1980s-1990s). They indicated that the development of school students' metahistorical concepts regarding "evidence" and "accounts" could be described as epistemic shifts from an objectivist stance (e.g. historical accounts are the same as the past; evidence as pictures of the past) to a contextualist one (e.g. accounts as (re)constructed past in accordance with criteria; evidence yielded from sources in a historical context). This research also stressed that school students' metahistorical concepts do not develop in a regular age-dependent sequence (Lee & Ashby, 2000; Lee & Shemilt, 2003).

A series of cognition-in-action studies found that primary and secondary school students used past texts (Afflerbach & VanSledright, 2001; Wineburg, 1991b), photographs or pictures (Foster et al., 1999; Lange, 2011), and historical accounts or textbooks (Martens, 2015; Paxton, 1999) as if they would provide neutral or objective information about the past. Historians, on the other hand, constructed evidence based on sources and accounts both in terms of their research questions and their function (e.g. the creators' intentions) for specific historical contexts. This seems to be one reason why students have difficulties in dealing with conflicting sources. Some work with student teachers of history has indicated that their struggle with historical reading and writing might also be explained by their naïve, objectivist epistemic views (Seixas, 1998; Yeager & Davisz, 1996). Practice-oriented studies that aimed to investigate ways to support historical thinking activities in class also indicated that epistemological problems of school students prevented them from learning how to construct plausible interpretations (e.g. VanSledright, 2002). While these studies stressed that epistemic aspects are of importance for the historical thinking of school students, historians, and history teachers, they didn't inform us how the epistemic aspects could be conceptualized, how they could be developed, and what roles they play in history teaching.

Inspired by work in educational psychology, Maggioni and colleagues addressed these questions. Based on the above-mentioned epistemic distinctions established in the CHATA project and the domain-general concepts of Kuhn, Weinstock and Cheney (2000), they constructed a framework of epistemic development from the copier (e.g. history as a copy of the past) to the borrower (e.g. people choose their preferred facts), to the criterialist stance (e.g. history as a process of inquiry). In a series of studies with history teachers, historians, and school students from the USA, they developed the "Beliefs about History Questionnaire" (BHQ). Applying statistical methods, they found that the instrument was able to differentiate two of the three intended stances (copier/borrower, criterialist) but showed rather low reliability (e.g. Maggioni, 2010; Maggioni et al., 2004). In a 2009 study with primary history teachers who participated in a professional development program, Maggioni et al. (2009) observed inconsistencies ("epistemic wobbling") in participants' epistemic shifts over the course of the program. This phenomenon was also observed in a sample of US college students who took part in an intervention study designed to address epistemic development (VanSledright & Reddy, 2014).

The study of Gottlieb and Wineburg (2012) indicated an explanation for the phenomenon of "epistemic wobbling". The authors asked, for example, religious and non-religious US historians to interpret religious sources. They found that religious historians switched between academic (e.g. plausibility) and religious beliefs (e.g. personal engagement) while non-religious historians did not. The authors interpreted this "epistemic switching" as a coordination between academic and religious criteria, in order to justify religious or historical interpretation (p. 111). This indicated that epistemic cognition in history is situated in context. Maggioni also used this line of reasoning to explain why she found no significant changes in the epistemic beliefs of US high school students who were taught by history teachers during a history course of one semester. Based on in-depth interviews with students and teachers, she concluded that while elaborated epistemic beliefs should be supported through history teaching, whenever historical thinking "activities are not situated within a learning experience in which disciplinary criteria are explicitly taught and discussed, individuals tend to rely on everyday criteria" (Maggioni, 2010, p. 299). These findings illustrated the challenges of investigating and supporting epistemic cognition in history.

Following Maggioni et al., some studies have adapted the BHQ to different national contexts, or have developed comparable instruments (e.g. Mierwald et al., 2017; Miguel-Revilla et al., 2017; Nitsche, 2017; Nokes, 2014). These studies similarly revealed ambiguous impacts of teacher training on (prospective) history teachers' epistemological beliefs (Namamba & Rao, 2016; Nitsche, 2019), difficulties in statistically proving epistemic stages or clear teaching effects, even when teaching strategies focused on epistemic development during quasi-experimental studies (e.g. Stoel, van Drie, et al., 2017). On this basis, Stoel and colleagues conducted a study with Dutch school students at the upper secondary level, and historians. Inspired by Hofer and Pintrich's (1997) dimensional distinction of epistemic beliefs ('nature of knowing', 'source of knowledge') and based on exploratory survey analyses, the authors suggested that epistemic beliefs in history could be differentiated between naïve and nuanced assumptions about knowing and knowledge. However, again the reliability of the measurement was rather low (Stoel, Logtenberg, et al., 2017).

In 2019, and against this background, we published the call for papers for this special issue. From our perspective, many central questions about epistemic cognition in history remained open. Theoretically, it was an open question whether the construct of epistemic cognition in history can be understood in developmental terms, should be described in terms of dimensions, or must be researched under the condition of its situatedness (Hofer, 2016). Methodologically, it was unclear whether quantitative survey analyzes can provide valid and reliable results for different age groups, or whether qualitative methods are more appropriate (Mason, 2016). Empirically, there was also a lack of sufficient information on how epistemic cognition can be developed in students in history classes, and during teacher education programs for prospective history teachers. The role of epistemic cognition in historical thinking and teaching also remained ill-defined (VanSledright & Maggioni, 2016).

The present issue

Although we are aware that this special issue does not resolve all of the above-mentioned research gaps, we believe that the present articles usefully address the questions in varying degrees. One paper gives an overview of the territory and discusses all the issues in greater depth. Two articles mainly concern methodological issues. Two papers involving school students touch on the connection between epistemic belief and metahistorical concepts. Two articles present analyses of the connection between epistemic beliefs and historical thinking aspects among university students. Finally, three articles provide insights into the epistemic cognition of history teachers and historians.

Gerhard Stoel, Albert Logtenberg, and Martin Nitsche present an overview of studies on epistemic beliefs conducted between 2015 and 2020. The authors indicate that researchers have conceptualized epistemic beliefs in history based on either developmental or dimensional frameworks, though most studies integrated developmental and dimensional approaches. Their review supports the assumption that sophisticated epistemic beliefs are related to aspects of historical thinking, while the relationship between naïve or subjectivist beliefs and historical thinking seems unclear. The authors also describe supportive principles and barriers for fostering nuanced epistemic beliefs in history education based on the studies reviewed. Discussing methodological advantages and disadvantages of prior studies, Stoel et al. conclude that future investigations should apply mixed-methods or triangulation designs.

Marcel Mierwald and Maximilian Junius address some methodological issues in the field. The authors give insights into challenges of epistemic measurement based on survey methodology. They analyze the cognitive validity of an adapted and German-speaking version of the "Beliefs about History Questionnaire". The authors present results of cognitive interviews with German school students at the upper secondary level who were asked to talk about their understanding of questionnaire items while answering the survey. Their findings indicated, for example, that misunderstandings of items were related to the complexity of applied terms, or confusing references to the school context. The study provides important information on how questionnaire items should be designed in the future to assess epistemic beliefs.

D. Kevin O'Neill, Sheryl Guloy, Fiona MacKellar, and Dale Martelli describe the theoretical underpinnings, design, and validation of the "Historical Account Differences Questionnaire" (HAD). They argue that beliefs about historical accounts are of importance because school students in multicultural societies should learn to handle the multiple perspectives presented in differing historical accounts. The authors aim to provide an instrument that helps history teachers assess their students' beliefs about historical accounts in order to inform lesson planning. Based on questionnaire data from 899 Canadian students from 8th grade through postsecondary studies, the authors argue for the construct validity of their survey based on differences in the beliefs of students at various levels of education and involvement with history as a discipline. O'Neill et al. offer a powerful tool for classroom assessment, but also make it clear that more research on the development of beliefs about historical accounts is needed.

Caitríona Ní Cassaithe, Fionnuala Waldron, and Therese Dooley illustrate reasons for the difficulties in developing epistemic beliefs based on a qualitative study with elementary school students. Their thematic analyses of interview data from Irish school students at the third and fourth grade levels indicate "bottlenecks" which hinder the development of primary students' epistemic beliefs in history. Children's assumptions about the term "history", their ideas about historical truth, or their understanding of historical accounts as fixed knowledge seem to be important factors that influence their epistemic shifts. However, the authors also provide evidence on how primary school students' epistemic development could be supported. Ní Cassaithe's et al. study provides important insights into the epistemic preconditions for elementary school students' history learning.

Diego Miguel-Revilla focuses on the epistemic beliefs and metahistorical concepts of 107 Spanish secondary school students. Analyzing qualitative data based on a task about the Spanish transition to democracy (1975-1982), the author indicates that only a few participants held

coherent epistemic beliefs, and most could be categorized as subjectivists. The author suggests that diverse conceptions regarding evidence and the aims of history as an academic discipline might explain this inconsistency. This study expands our knowledge regarding epistemic incoherence, by pointing to the role of metahistorical concepts.

Martin Nitsche and Monika Waldis present results of a study that investigated how prospective German Swiss history teachers' epistemological beliefs impact their narrative competence (i.e., analysis of sources and accounts; (re)construction of narratives). Applying a historical writing task, survey methodology (e.g. epistemological beliefs, situational interest), and statistical methods, the study indicated small effects of participants' epistemological beliefs on their narrative competence, while situational interest was found to be more influential. The study provides the first statistical evidence of the connection between prospective history teachers' epistemological beliefs and aspects of their historical thinking, while it also suggests that situational aspects (e.g. situational interest, writing topic) are of importance. The authors interpret their results in line with situational approaches to epistemic cognition. They conclude that future studies should investigate epistemological beliefs in relation to specific tasks and historical content.

Kristin Sendur, Carla van Boxtel, and Jannet van Drie address the relationship between epistemic beliefs, second-order concepts, and historical reasoning based on a sample of Turkish undergraduate students who were asked to answer a questionnaire on epistemic beliefs and complete a historical reasoning task. In addition, some participants took part in in-depth interviews to make their tacit beliefs more visible. The authors show that participants' performance in source-based argumentative writing and their epistemic beliefs regarding historical methodology are correlated significantly. They also demonstrate relationships between students' interview answers and their historical reasoning, though this relationship is less strong. This study shows that university students' epistemic beliefs and historical reasoning seem to be related, and that a mixed-method approach could be fruitful to investigate this relationship.

Mikko Kainulainen, Marjaana Puurtinen, and Clark A. Chinn present an interview-based study about the aims that Finnish academic historians address in their research projects and beyond. According to the AIR model, which conceptualizes epistemic aims and values, ideals, and reliable processes for producing epistemic products, the authors show that historians mention several aims, which vary considerably according to the different kinds of investigations the historians are involved in. Moreover, historians' aims seem to extend beyond knowing and understanding past(s) to publishing and disseminating findings. Their aims are also connected to the system or community level to promote historical research. The authors of this study stress that the epistemic practices of historians are strongly related to broader contexts and specific situations, which are made visible in their epistemic aims. The study suggests that it is fruitful to investigate the epistemic aims that individuals pursue in different contexts.

Henrik Åström Elmersjö and Paul Zanazanian present a study with Canadian and Swedish upper secondary school history teachers. They examine participants' beliefs about the relationship between the past and history, and explore their reflexiveness regarding epistemic issues and their relation to history teaching. The authors used a mixed-methods approach, and present analyzes from teachers' survey data and interviews. A cross-cultural comparison indicates that participants from each country hold different assumptions about historical knowledge, its construction, and implications for their practice. While participants from both countries seem to demonstrate epistemic wobbling between objectivist and critical views about history, Swedish teachers tend to make a clearer distinction between the past and history than their Canadian counterparts. The authors suggest that differences regarding the political nature of history teaching between the two countries might explain the results (e.g. nation-building in Canada vs. method-orientation in Sweden). This study illustrates how epistemic cognition in history is embedded in socio-cultural contexts. Thus, more cross-cultural research in this area may bear fruit in the future.

In the last article of this issue, Marjolein Wilke, Fien Depaepe and Karel Van Nieuwenhuyse elaborate the relationship between the epistemological beliefs, the understanding of historical

thinking and the instructional practice of Belgian history teachers from Flanders. Based on data from closed- and open-ended online questionnaire items regarding epistemology and historical thinking, as well as interviews about teaching material, the authors show that most teachers acknowledge the interpretive nature of history, while they do not include this view in their concepts of historical thinking. Moreover, additional beliefs about students or contextual school factors seem to be more important for teachers' reflexion about teaching material. Once again, this research indicates that we need more in-action-research to detect the relations between teachers' epistemic cognition, their concepts about historical thinking or teaching, and contextual aspects in history classes.

In summary, this special issue demonstrates a combination of theoretical and empirical approaches, showing some common ground and shared conclusions. For the refinement of theory, it seems fruitful for future research to combine existing approaches (e.g. developmental and situational). For example, it seems that not only is the development and promotion of students' and teachers' epistemic beliefs dependent on contextual situatedness, but so too are the epistemic practices of historians in setting goals, or those of teachers in reflecting on teaching materials. Presumably our research efforts are also contextually different. Methodologically, it became clear that it is challenging to develop valid questionnaires to assess epistemological beliefs, and it seems fruitful to apply a wider variety of methods here as well. Moreover, additional effort is needed to provide accessible tools for classroom assessment, such as the HAD questionnaire. Empirically, the present studies illustrate that epistemic cognition, metahistorical concepts, and historical thinking are connected. What remains open is whether and how the connections can be demonstrated for learners of all ages, how the constructs can be fostered in different institutional as well as sociocultural contexts, and what stages or qualities of epistemic beliefs and cognition can realistically be achieved in learners at different educational levels. We hope that this special issue represents not an end point to research on epistemic cognition in the field of history education, but rather that it provides stimuli to further explore the open questions.

Acknowledgment

We would like to thank all authors for their articles and their patience, which was especially tested due to the work slowdown during the Coronavirus (SARS-CoV-2) pandemic. We would also like to thank the authors whose five contributions had to be rejected after review. We hope that they will find other ways to publish their work. In addition, we would like to thank the colleagues who were willing to review the submitted articles. Finally, we thank all the staff of *Historical Encounters,* especially Robert J. Parkes and Melanie Innes, for supporting our special issue.

References

Afflerbach, P., & VanSledright, B. (2001). Hath! Doth! What? Middle graders reading innovative history text. *Journal of Adolescent & Adult Literacy, 44*(8), 696–707. https://www.jstor.org/stable/40018742

Foster, S. J., Hoge, J. D., & Rosch, R. H. (1999). Thinking aloud about history: Children's and adolescents' responses to historical photographs. *Theory & Research in Social Education, 27*(2), 179–214. https://doi.org/10.1080/00933104.1999.10505878

Gottlieb, E., & Wineburg, S. (2012). Between veritas and communitas: Epistemic switching in the reading of academic and sacred history. *Journal of the Learning Sciences, 21*(1), 84–129. https://doi.org/10.1080/10508406.2011.582376

Hofer, B. K. (2016). Epistemic cognition as a psychological construct: Advancements and challenges. In J. A. Greene, W. A. Sandoval, & I. Braten (Eds.), *Handbook of epistemic cognition* (pp. 19–38). New York: Routledge.

Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research, 67*(1), 88–140. https://doi.org/10.2307/1170620

Körber, A., & Meyer-Hamme, J. (2015). Historical thinking, competencies, and their measurement: Challenges and approaches. In K. Ercikan & P. Seixas (Eds.), *New directions in assessing historical thinking* (pp. 89–101). New York: Routledge.

Kuhn, D., Cheney, R., & Weinstock, M. (2000). The development of epistemological understanding. *Cognitive Development, 15*(3), 309–328. https://doi.org/10.1016/S0885-2014(00)00030-7

Lange, K. (2011). *Historisches Bildverstehen oder Wie lernen Schüler mit Bildquellen? Ein Beitrag zur geschichtsdidaktischen Lehr-Lern-Forschung*. Berlin: LIT.

Lee, P., & Ashby, R. (2000). Progression in historical understanding among students ages 7-14. In P. N. Stearns, P. C. Seixas, & S. S. Wineburg (Eds.), *Knowing, teaching, and learning history. National and international perspectives* (pp. 199–222). New York: New York University Press.

Lee, P., & Shemilt, D. (2003). A scaffold, not a cage: Progression and progression models in history. *Teaching History, 113*, 13–23.

Lorenz, C. (2011). History and theory. In D. Woolf & A. Schneider (Eds.), *The Oxford History of historical writing* (Vol. 5, pp. 13–35). Oxford, UK: Oxford University Press.

Lyon Macfie, A. (2010). On the defence of (my) history. *Rethinking History, 14*(2), 209–227. https://doi.org/10.1080/13642521003710755

Maggioni, L. (2010). *Studying epistemic cognition in the history classroom: Cases of teaching and learning to think historically.* [PhD Dissertation]. University of Maryland. http://hdl.handle.net/1903/10797

Maggioni, L., Alexander, P. A., & VanSledright, B. A. (2004). At a crossroads? The development of epistemological beliefs and historical thinking. *European Journal of School Psychology, 2*(1–2), 169–197.

Maggioni, L., VanSledright, B. A., & Alexander, P. A. (2009). Walking on the borders: A measure of epistemic cognition in history. *The Journal of Experimental Education, 77*(3), 187–214. https://doi.org/10.3200/JEXE.77.3.187-214

Martens, M. (2015). Understanding the nature of history. Students' tacit epistemology in dealing with conflicting historical narratives. In A. Chapman & A. Wilschut (Eds.), *Joined-up history: new directions in history education* (pp. 211–230). Charlotte, NC: Information Age.

Mason, L. (2016). Psychological perspectives on measuring epistemic cognition. In J. A. Greene, W. A. Sandoval, & I. Braten (Eds.), *Handbook of epistemic cognition* (pp. 375–392). New York: Routledge.

Mathis, C., & Parkes, R. (2020). Historical thinking, epistemic cognition, and history teacher education. In C. W. Berg & T. M. Christou (Eds.), *The Palgrave handbook of history and social studies education* (pp. 189–212). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-37210-1_9

Mierwald, M., Seiffert, J., Lehmann, T., & Brauch, N. (2017). Fragebogen auf dem Prüfstand—Ein Beitrag zur Erforschung und Weiterentwicklung eines bestehenden Instruments zur Erfassung epistemologischer Überzeugungen in der Domäne Geschichte. In B. Ziegler & M. Waldis (Eds.), *Forschungswerkstatt Geschichtsdidaktik 15: Beiträge zur Tagung 'geschichtsdidaktik empirisch 15'* (pp. 177–190). Bern: hep.

Miguel-Revilla, D., Carril, M. T., & Sánchez-Agustí, M. (2017). Accediendo al pasado: Creencias epistémicas acerca de la Historia en futuros profesores de Ciencias Sociales || Accessing the Past: Epistemic Beliefs about History in Social Studies Pre-Service Teachers. REIDICIS. *Revista de Investigación en Didáctica de las Ciencias Sociales, 1,* 86–101. https://doi.org/10.17398/2531-0968.01.86

Moore, A., Invernizzi-Accetti, C., Markovits, E., Pamuk, Z., & Rosenfeld, S. (2020). Beyond populism and technocracy: The challenges and limits of democratic epistemology. *Contemporary Political Theory, 19*(4), 730–752. https://doi.org/10.1057/s41296-020-00398-1

Munslow, A. (2017). History, skepticism and the past. *Rethinking History, 21*(4), 474–488. https://doi.org/10.1080/13642529.2017.1333287

Namamba, A., & Rao, C. (2016). Teachers' beliefs about history and instructional approaches: A survey of secondary school teachers in kigoma municipality, tanzania. *International Journal of Education and Research, 4*(8), 203–220.

Nitsche, M. (2017). Geschichtstheoretische und -didaktische Beliefs angehender und erfahrener Lehrpersonen—Einblicke in den Forschungsstand, die Entwicklung der Erhebungsinstrumente und erste Ergebnisse. In U. Danker (Ed.), *Geschichtsunterricht – Geschichtsschulbücher – Geschichtskultur. Aktuelle geschichtsdidaktische Forschung des wissenschaftlichen Nachwuchses* (pp. 85–106). Göttingen: V&R unipress.

Nitsche, M. (2019). *Beliefs von Geschichtslehrpersonen – eine Triangulationsstudie*. Bern: hep. https://doi.org/10.36933/9783035516005

Nokes, J. D. (2014). Elementary students' roles and epistemic stances during document-based history lessons. *Theory & Research in Social Education, 42*(3), 375–413. https://doi.org/10.1080/00933104.2014.937546

Paxton, R. J. (1999). A deafening silence: History textbooks and the students who read them. *Review of Educational Research, 69*(3), 315–339. https://doi.org/10.3102/00346543069003315

Ricœur, P. (1984). *Time and narrative* (Vol. 1). Chicago and London: University of Chicago Press.

Rüsen, J. (2020). A turning point in theory of history: The place of Hayden White in the history of metahistory. *History and Theory, 59*(1), 92–102. https://doi.org/10.1111/hith.12147

Seixas, P. (1998). Student teachers thinking historically. *Theory and Research in Social Education, 26*(3), 310–341. http://dx.doi.org/10.1080/00933104.1998.10505854

Seixas, P. (2017). A model of historical thinking. *Educational Philosophy and Theory, 49*(6), 593–605. https://doi.org/10.1080/00131857.2015.1101363

Shemilt, D. (1983). The devil's locomotive. *History and Theory, 22*(4), 1. https://doi.org/10.2307/2505213

Stoel, G., Logtenberg, A., Wansink, B., Huijgen, T., van Boxtel, C., & van Drie, J. (2017). Measuring epistemological beliefs in history education: An exploration of naïve and nuanced beliefs. *International Journal of Educational Research, 83,* 120–134. https://doi.org/10.1016/j.ijer.2017.03.003

Stoel, G., van Drie, J., & van Boxtel, C. (2017). The effects of explicit teaching of strategies, second-order concepts, and epistemological underpinnings on students' ability to reason causally in history. *Journal of Educational Psychology, 109*(3), 321–337. https://doi.org/10.1037/edu0000143

van Boxtel, C., & van Drie, J. (2018). Historical reasoning: Conceptualizations and educational applications. In S. A. Metzger & L. M. Harris (Eds.), *The Wiley international handbook of history teaching and learning* (pp. 149–176). New York: Wiley & Blackwell. https://doi.org/10.1002/9781119100812.ch6

VanSledright, B. A. (2002). Confronting history's interpretive paradox while teaching fifth graders to investigate the past. *American Educational Research Journal, 39*(4), 1089–1115. https://doi.org/10.3102/00028312039004089

VanSledright, B. A. (2011). *The challenge of rethinking history education: On practices, theories, and policy.* New York: Routledge.

VanSledright, B. A., & Maggioni, L. (2016). Epistemic cognition in history. In J. A. Greene, W. A. Sandoval, & I. Braten (Eds.), *Handbook of epistemic cognition* (pp. 128–146). NY: Routledge.

VanSledright, B. A., & Reddy, K. (2014). Changing epistemic beliefs? An exploratory study of cognition among prospective history teacher. *Revista Tempo e Argumento, 06*(11), 28–68. https://doi.org/10.5965/2175180306112014028

White, H. (1973). *Metahistory: The Historical Imagination in Nineteenth-century Europe*. Baltimore: John Hopkins University Press.

Wineburg, S. S. (1991a). Historical problem solving: A study of the cognitive processes used in the evaluation of documentary and pictorial evidence. *Journal of Educational Psychology, 83(*1), 73–87. http://dx.doi.org/10.1037/0022-0663.83.1.73

Wineburg, S. S. (1991b). On the reading of historical texts: Notes on the breach between school and academy. *American Educational Research Journal, 28*(3), 95–519.

Yeager, E. A., & Davisz, O. L. (1996). Classroom teachers' thinking about historical texts: An exploratory study. *Theory & Research in Social Education, 24*(2), 146–166. https://doi.org/10.1080/00933104.1996.10505774

About the Authors

Martin Nitsche, Dr. phil., is a Senior Researcher at the Centre for Civic Education and History Education in Aarau at the School of Education, University of Applied Sciences Northwestern Switzerland. During summer 2022 he will hold an interim professorship for history didactics at University of Cologne. His main research interests include history teachers' professionalization with a focus on their (e.g. epistemological) beliefs, assessments of historical thinking and learning activities, and analyses, as well as preparations of teaching material. Dr. Nitsche has received a grant from Swiss National Science Foundation (SNF) for his project "Research of Learning Processes in History (RicH)" (2020-2023). He is also co-speaker of the working group "Empirical History Education Research" of the German Society for History Didactics.

Email. martin.nitsche@fhnw.ch ORCID: 0000-0003-4261-5583

Christian Mathis, Dr. phil., is currently a Professor of History Education at Zurich University of Teacher Education, Switzerland. He is head of the Social Sciences Education Research Group and an Associate Editor of *Historical Encounters*. His scholarly interests and contributions are located within the field of History and History Education; Social Studies Education; Holocaust Education; Teacher Education; Teaching and Learning Archaeology. His scholarly projects focus in various ways, on students' and teachers' epistemic cognition in history, and on learning history in museums, historical and archaeological sites, in public playgrounds, and with toys, and monuments.

Email: christian.mathis@phzh.ch ORCID: 0000-0002-2865-874X

D. Kevin O'Neill, B.Sc., PhD is Associate Professor of Education and Technology at Simon Fraser University, where he helps to prepare future teachers, and teaches and mentors students in the Educational Technology and Learning Design graduate programs. He has had a longstanding interest in history teaching and design-based research.

Email: kevin_oneill@sfu.ca ORCiD: 0000-0001-6880-9146