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Theory and Theorizing in Agricultural History

Shane Hamilton

Abstract

The field of agricultural history could benefit from interdisciplinary engagement with theoretical work. Rather than chiding agricultural historians for avoiding theory, this essay suggests specific ways in which many agricultural historians are already engaging with theory. In particular the practice of colligation may be an especially productive mode for agricultural historians to broaden the audience for their research and enrich their teaching. The essay concludes with a brief set of possibilities for building on theories in economics, geography, sociology and anthropology, and political science.

Bio

Shane Hamilton is the author of *Supermarket USA: Food and Power in the Cold War Farms Race* (Yale University Press, 2018) and is a senior lecturer in management at the University of York. He served as chair of the program committee for the 2019 centennial anniversary meeting of the Agricultural History Society held in Washington, D.C.

Is there a place for theory in agricultural history? At first glance it might seem that the field is nearly atheoretical. A Web of Science search for any variant of "theory" appearing in an article in *Agricultural History* since 1977, for instance, returns only 10 out of 995 articles (1.01 percent).[1] One of those ten articles is a sardonic piece by an economist chiding the field for being atheoretical.[2] Seven are histories *of* theories in natural science or social science, ranging from agrarianism to ecology.[3] Only one research article uses historical methods to contribute directly to an ongoing theoretical debate.[4] The tenth result is an

essay suggesting that rural and agricultural historians might find value in engaging with theories from social and natural sciences. That piece, by Robert P. Swierenga—a co-founder of the Social Science History Association and prolific contributor to the new social history of the 1970s and 1980s—was published in 1982, and according to Web of Science has been cited only nine times.[5] A more recent roundtable, not yet indexed by Web of Science, includes several suggestions for integrating theoretical insights from science and technology studies into agricultural history.[6]

I have no desire to chide agricultural historians for avoiding theory and theorization. Indeed, I hope to show below that agricultural history is already quite far from being inherently atheoretical. Yet, echoing Robert P. Swierenga's 1982 proposals, I suggest that there are opportunities for agricultural historians to pursue interdisciplinary approaches that could build bridges with other scholars and expand the audience for our research. I bring new insights to bear on this issue, however, drawing on recent work on the relationship between theory and social inquiry, to offer what I hope are productive modes for agricultural historians—perhaps especially those who do not see themselves as "theoretical"—to engage more directly with theory. To advance the case, I first sketch out some thoughts on the nature of theory and theorization that are relevant to researching and teaching agricultural history. Then I consider some ways in which theory and theorizing already informs research in agricultural history, before concluding with a few brief suggestions for furthering the dialogue.

There is a consciously reflexive element to this essay. I recently found myself in an interdisciplinary social science department where both my teaching and research are necessarily framed by intense engagements with theory. The analysis and suggestions I offer here are thus influenced by my own experience in confronting the challenge of integrating theoretical perspectives from other disciplines into historical research and teaching, and, even more challenging, seeking to contribute to social science theory by

drawing on my own historical research.[7] Complicating matters is the tendency for theorists to seek simplification and abstraction, while historians seek complexity and contingency. This tension has a generative side, however, for as I often tell my students, "all theory is wrong; but some theories are useful."[8] The limitations of theory, I suggest below, provide an opportunity for developing useful insights in agricultural history, rather than a reason to be suspicious or overly skeptical of its possibilities.

This essay is not intended to be a Grand Call for transforming agricultural history into a "scientific" discipline. I side firmly with Hayden White's position that any attempt to build an impenetrable barrier between "factual" science and interpretive history is unproductive at best, and that in any case there is value in producing empirically robust narratives that do not try to make universally applicable claims across time or space.[9] Nor is this an essay on the methodology or philosophy of history. There are numerous important works that do this and do it well—albeit rarely with reference to agricultural history *per se*, with the significant exception of the *Annales* School work of Marc Bloch and Fernand Braudel.[10] Instead, I offer here a much more limited set of suggestions, intended solely to spark a conversation about *possibilities* for extending the reach and impact of agricultural history in the twenty-first century.

Do Agricultural Historians Need Theory?

Theory can be off-putting for historians, particularly when it is characterized by strange jargon or unconventional uses of parentheses. Even more disturbing for historians is the apparent willingness of some social theorists to develop elaborate models and sophisticated concepts using only the thinnest shards of evidence. Yet at its core, theory is simply a set of abstractions that enable us to understand and explain something particular about the social or natural world. Theory helps us to confront what is unknown—while

crystallizing what is already known—about the social and natural world. It thus enables the building of a coherent body of knowledge. In this sense, we all need theory.[11]

Milton Friedman offered a helpful way of thinking about theory with his 1953 declaration that it should operate as "an engine" for analysis of a social phenomenon, rather than a "photographic reproduction of it."[12] Theory, like a highway map, is necessarily an abstraction that leaves out empirical details—the messiness and complexity of the real world, its "ground truth"—in order to generate knowledge. Friedman's perspective, as historical sociologist Donald Mackenzie has shown, was built on problematic and highly controversial assumptions about the purpose of theory and its relationship to empirical evidence. For Friedman, the predictive power of a theory outweighed its empirical basis; what made a theory valuable was its explanatory elegance, not its camera-like accuracy in representing the world as it appears.[13] Historians who devote their professional lives to sifting through archives and verifying the veracity of sources through triangulation and close scrutiny of thousands of documents and artifacts, would (and should) reject such a willingness to ignore empirical evidence. Yet Friedman's notion that theory operates more like an engine than a camera is important, because it helps us to focus on what makes theory *useful* for our disciplinary purposes. Theory need not capture a universal truth in photographic detail in order to be productive.

Theory is useful for agricultural historians when it enables us to understand and explain some aspect of the social or natural world. To derive explanations and deepen our understanding, we must make assumptions. Assumptions can be wrong, and as historians we know that assumptions depend on context, and that context changes over time and space. Yet assumptions help to drive the creation of new knowledge, rather than simply restate existing knowledge, and are therefore a "key part of the skeleton of theorizing."[14] Theory becomes especially useful to historians when we are able to test it—e.g., to challenge or support its assumptions, or consider the contexts in which a given theory is or

is not applicable. If a particular theory does not help us understand or explain something about the past, it is not useful.[15] But if—like an engine—it does drive new insights, understandings, or explanations, the theory can enable other researchers to make sense of our findings and build upon them.

What I am driving at here is that agricultural historians, whether they know it or not, are already theorizing. We could perhaps do a better job of explicitly signaling what we are doing, and thereby building bridges to other fields of history and to other disciplines, but we already "construct concepts, use analogies, build models" in our efforts to understand and explain the events of the past.[16] None of the agricultural historians that I know would subscribe to the notion that history is simply "one damned thing after another." Rather than produce chronologically ordered lists of events from the past, we seek to interpret the past, create order from it, and draw out the contemporary significance of either change or continuity over time. In this we know that the past is not the same as history; history must be actively made, in the present, not through the mere retrieval of past events but through deliberate interpretation.[17] Critiques of history as an atheoretical discipline tend to rely on the assumption that there is a strict opposition between causal explanation and contextual understanding (with history supposedly prioritizing the latter over the former), but this assumption has been thoroughly rejected by Reinhart Koselleck and Paul Ricoeur.[18] Furthermore, as William Sewell has articulated, historians have a particularly sophisticated—albeit usually implicit—mode of theorizing, in that we always take temporality into account, in multifaceted ways, in our efforts to understand and explain aspects of the social or natural world. Like Sewell, I am often struck by the simplistic notions of time and temporality that many non-historian social scientists hold. So are many social scientists; it is remarkably common for social scientists to criticize their own fields for lacking sophisticated approaches to temporality or even ignoring time completely.[19]

Even when theory is "wrong" in failing to fully capture the contingencies and complexities of social and natural change over time, it can nonetheless be productive for generating new knowledge. And for agricultural historians, perhaps most useful of all is the *process* of theorizing, which, to draw on the work of sociologist Richard Swedberg, I would suggest can make our work "more interesting" to a wider audience. For Swedberg, "theory" implies "something that is finished once and for all and typically exists in a printed form," whereas "theorization" is a process that all social researchers go through even if they do not ultimately derive a "finished" theory. Swedberg lays out a series of steps in the process of theorizing that will likely resonate with what most agricultural historians understand themselves to be doing in their research: first, observe, and in doing so, "make an effort to tap an unusually broad range of sources." Second, rather than attempting to reproduce existing knowledge, seek to develop new "social facts," and third, if in doing so some new or surprising observation has been made, give it a name.[20]

In the field of agricultural history, one example of this part of the process of theorizing would be the development of the concept of the "agricultural ladder." Developed by economists Richard T. Ely, Henry C. Taylor, and William J. Spillman in the early twentieth century, the concept of the agricultural ladder has been deployed, critiqued, redeployed, and reconsidered by agricultural historians ever since. Clearly the agricultural ladder has been a productive concept, an engine of critical analysis, even if it remains to this day unsatisfying as a "finished" theory.[21] Other more recent examples of concepts developed in agricultural history that fall short of full theory would include Sigrid Schmaltzer's use of the Chinese binary *yu/tang* to explore socialist agricultural science; Courtney Fullilove's characterization of crop seeds as "deep-time technologies"; or my own conceptualization of a "Cold War farms race."[22]

Swedberg's fourth step in the process of theorizing—colligation—is worth dwelling upon, for although this is likely an unfamiliar word for agricultural historians, the practice it

describes will be recognizable.[23] "Colligation," originally meaning a material or figurative "binding together" or "conjunction," was appropriated by philosopher William Whewell in 1847 to describe the process of mentally binding together multiple empirical facts and "superinducing" on them a conceptual unity. Like a thread drawing together pearls into a necklace, Whewell argued, these superimposed concepts draw together facts.[24] Thus although colligation entails the imposition of abstraction onto empirical evidence, it nonetheless allows the specific facts to also stand on their own, as distinctive elements that could be tied together with alternative threads. Here we might see a crucial difference between colligation and synthesis, for synthesis entails the creation of a unitary whole that becomes effectively distinct from its individual parts; in synthesis the pearls become a necklace.[25]

In agricultural history, colligation seems most prevalent in our efforts to periodize the events of the past (our pearls). Periodization is the process whereby we intentionally distort chronological or calendrical time by "compressing" numerous events into a given period of time and "inflating" the artificial mental space between these artificially conceived segments of time.[26] Rather than narrating one linear string of pearl-events, we tie off some sections as periods and give those periods names. In agricultural history we develop, debate, and reconsider the beginnings, endpoints, and significance of colligated temporal concepts such as "the agricultural revolution," "New Deal farm policy," "the Green Revolution," and "the Anthropocene," among many others.[27] Not only do we already do this, and do it productively, but it is often in the process of periodization that our work becomes most "interesting" (in Swedberg's sense) to scholars in other fields of history and even in other disciplines. Indeed, in the previous footnote I list works that demonstrate how the periodizing work of agricultural historians has been taken up by environmental historians, accounting historians, political scientists, economists, and sociologists to generate new

insights in adjacent disciplines. In turn, agricultural historians can draw upon the research of those fields and disciplines to generate new knowledge or approaches in our own field.

Full development of theory, according to Swedberg, requires several more steps—such as analogizing, typologizing, and/or building a framework or model—before arriving at a satisfactory explanation. "It is hard to come up with a good explanation," insists Swedberg, for this requires creativity and insight and intellectual playfulness, and furthermore it must be widely accepted in the field in order to be considered good theory.[28] But the beauty of the *process* of theorizing is that it is not always necessary to complete all the steps in order to deepen our understanding of social or natural phenomena. Observing, inquiring, naming, and colligating can in themselves make significant contributions to the development of knowledge, even though they fall short of "finishing" the process of theorizing.

One reason this point seems especially useful for agricultural historians is that it offers an important mode for linking our research to our teaching objectives. As historians we are increasingly familiar with the **supposed** notion that undergraduate history degrees are of no "use" in "the real world," to which we commonly retort that we develop essential critical thinking and communications skills in our students. While this is undoubtedly true, it seems relatively easy for any other discipline—including STEM fields, business and management studies, or even technical writing programs—to argue the same, and to do so from a privileged position of not watching their enrollments steadily declining. If, however, historians can be more explicit about how the process of theorizing in history develops unique modes of producing deeper and more sophisticated understanding of relevant social and natural phenomena, we have a much more compelling case. Historical approaches to theory and theorizing, from this perspective, could be articulated as *exceptionally* "useful" in the "real world."

In the interdisciplinary management school where I currently teach, developing students' capacity to comprehend and apply theory is considered fundamental. We generally start from theory not to "substitute abstraction" for "reality," but instead to develop students' "capacity to cope with complexity," particularly "under conditions of uncertainty and imperfect information."[29] This seems remarkably similar to what agricultural historians seek to do in the classroom when we assign historical monographs that advance multicausal arguments for change over time, or when we send students into the archives to make sense of uncertain, contradictory, often fragmentary information. Yet importantly, nearly all theory-based teaching in business and management schools focuses on developing *analytical* skills. That is, students are taught to distill complex information into simpler, more basic, constituent parts in order to facilitate efficient decision-making.[30] While analysis is undoubtedly a useful skill, as well as an important aspect of the process of theorizing, it is not the same as colligation or synthesis—both of which, I am suggesting, are processes of theorizing that historians are especially adept at doing and teaching. Analysis is generally taught via the case study method, which despite being enormously popular in law and business schools around the world, has also been repeatedly criticized for failing to develop the ethical, empathic, sensemaking, and creative abilities that students are expected to take with them into a "real world" that is characterized not by simplicity but by complexity and uncertainty. Agricultural historians have an opportunity, by explicitly promoting aspects of the process of theorizing such as colligation and synthesis in their research and teaching, to make a convincing argument for the inherent *usefulness* of what we do.[31]

Another way to understand the importance of theory, then, is to consider it a necessary response to the unsettling events of the ever-changing human condition. The most ambitious social theorists of the early twentieth century—DuBois, Durkheim, Goldman, Weber—produced their insights in the context of enormous upheavals, witnessing mass global migrations, rapid technological change, colonization and decolonization, and

devastating total warfare. Crisis, then, may provide the context for "ambitious bouts of new theorizing."[32] And arguably we currently occupy a time of unprecedented global crisis in agriculture: climate change, herbicide-resistant superweeds, bee colony collapse, global monocultures . . . the list could go on. Agricultural historians, by engaging more explicitly and ambitiously in the process of theorizing, could contribute important insights into how to confront the agricultural challenges of our time. Especially important, I would suggest, is the ability of many agricultural historians to take transdisciplinary (and not just interdisciplinary) approaches to issues such as sustainability that cut across multiple realms of both social and natural systems.[33] Much existing social science theory—especially in the disciplines of economics, sociology, and psychology—focuses almost entirely on socially constructed phenomena and does not seek to "explain the interaction between the social and the biophysical worlds."[34] Agricultural and environmental historians, by contrast, often engage most directly with precisely those theoretical perspectives that *do* apply to the interaction between the social and the natural. Indeed, among the most generative of frameworks in our field in recent decades has been the integration, thanks to William Cronon and Neil Smith, of the Hegelian and Marxian concepts of "first nature" and "second nature" to help move beyond a simplistic dichotomy between the "social" and the "natural."[35] And, as I noted in the introductory paragraph of this essay, one of the most common ways that agricultural historians publishing in this journal have worked with theory in recent years is to historicize theoretical perspectives that cross the boundaries between social and natural sciences, such as ecology. A particularly ambitious project currently underway—the "Moving Crops and the Scales of History" working group, spearheaded by Francesca Bray, Barbara Hahn, John-Bosco Lourdusamy, Tiago Saraiva, and Dagmar Schäfer—is an example of precisely this sort of transdisciplinary theorizing in action.[36]

Possibilities for Theory and Theorizing in Agricultural History

In the preceding section I have proposed that agricultural historians are already more theoretically engaged than they might think. Indeed, many of the readers of this essay are likely better equipped than myself to propose possible avenues for strengthening the theoretical engagement in agricultural history. But in the spirit of provoking and welcoming further discussion on this topic, I offer below a brief (and by no means exhaustive) set of possibilities for drawing on, and contributing to, theories in economics, geography, sociology and anthropology, and political science. This relatively limited range of theoretical perspectives is necessarily bounded by the limits to my own knowledge, which does not reach far into, for instance, poststructural literary theory or evolutionary biology.

Agricultural historians have for many decades drawn on economic theories in their research, including theories of innovation, imperfect markets, and economic development.[37] It is no mere accident, after all, that among the founders of the Agricultural History Society were several individuals who believed that the conjunction of history and economics would produce insights into better farm policy. Since the society's founding, as Claire Strom and Doug Hurt have shown, economic concepts and theories have been very important to the field.[38] There are, however, theoretical perspectives in economics—including heterodox perspectives—that agricultural historians may be less familiar with but might nonetheless find helpful for their research. Transaction cost economics, associated with Ronald Coase and Oliver Williamson, has been highly influential in much social science research in recent decades, and bears significant potential for explaining important aspects of the economic behavior of farmers, farm organizations, agricultural businesses, and farm policymakers.[39] Among other insights, transaction cost economics offers a mode for understanding and explaining the boundaries between markets, firms, and states—clearly a matter of interest in agricultural history, particularly in relation to farm policy. Heterodox approaches to economics, including evolutionary economics and behavioral economics, could deepen our

historical understanding of farmers' embeddedness in complicated and dynamic organizations and markets.[40]

Even more heterodox perspectives on economic theory, such as new theories of financialization**—which refers to the growing influence of the practices and mentalities of banking and insurance firms in the overall economy—**are already being adopted by rural sociologists and economic geographers of agriculture. Although recent works on financialization sometimes include a historical perspective, there is clearly an opportunity for agricultural historians to contribute substantively to this work, not least because so much of the literature that adopts a historical perspective generally ignores agriculture entirely.[41] And importantly, in any engagement with economic theory, agricultural historians would do well to remember that we can bring important insights to bear on economic theory, not only through our ability to discover robust empirical evidence, but through our processes of colligation and synthesis. We need not approach economic theory solely from the perspective of applying it to our historical data; we can also use our research to test and critique the assumptions that are embedded in economic theory. Financialization, a theoretical concept still in the process of being developed, seems especially ripe for contributions from our field.

Geography has had a long and often close relationship with agricultural history. Central place theory, once a foundational theoretical perspective in geography, has been influential for some agricultural historians.[42] More recently developed concepts and frameworks from geography offer possibilities for continuing the dialogue. Global commodity chains and global value chains theory, for instance, seems directly relevant to the increasingly transnational work that many young agricultural historians are currently engaging in.[43] The frameworks from commodity chains and value chains analyses have become very widely adopted by business actors and policymakers in the world agrifood system, so for agricultural historians seeking to engage with contemporary governance

issues engaging with the concepts might be especially productive.[44] The theory of "metabolic rift," derived from John Bellamy Foster's reading of Karl Marx and recently adopted by environmental geographers and historians, also seems promising for agricultural history as a means of developing systematic understandings of the social and environmental processes of capitalist agriculture.[45] Geographers have also been among the most sophisticated theorists of neoliberalism; the work of Julie Guthman on the contemporary politics of organic agriculture seems particularly relevant to the interests of agricultural historians seeking to bring historical perspectives to bear on the assumptions underlying contemporary food and agricultural policy.[46] Geographers are actively incorporating insights and methods from history into their work on agriculture and food, suggesting there are multiple opportunities for more bidirectional engagement.[47]

Sociology and agricultural history have traditionally overlapped intellectually in many ways, not least through the active involvement of some influential rural sociologists in publishing in the field of agricultural history.[48] From Charles Galpin's wheel-rut analysis of rural communities to more recent work in rural women's history, the influence of rural sociology on agricultural history has been quite significant.[49] Beyond rural sociology, however, there are many sociological theories and concepts that might be useful for agricultural historians. We have in recent years, for instance, witnessed quite a few uses of "power" in titles of works in agricultural history, but rarely do we see theoretical unpacking of the term.[50] Sociologists and anthropologists have devoted quite a bit of theoretical attention to the nature of social power, however. The works of Pierre Bourdieu, Judith Butler, Steven Lukes, and C. Wright Mills all potentially offer useful insights for agricultural historians concerned with the sources and applications of power in social life.[51] Or, from a more interdisciplinary perspective, the concept of "biopolitics" could produce fruitful insights for agricultural historians, as the work of Gabriel Rosenberg has demonstrated.[52]

Political science, finally, opens up many theoretical possibilities for agricultural historians. Longstanding theoretical traditions in political science, such as interest group theory and state capacity and administrative state-building, have undoubtedly influenced work in the political history of agriculture.[53] Other core theoretical concepts from political science, such as regulatory capture or co-regulation, seem fruitful given the broad regulatory powers that historically have been entrusted to state and federal departments of agriculture in the United States and Europe.[54] Governance in agrifood systems often entails complex arrangements between private and public organizations, raising questions of accountability, legitimacy, transparency, and sovereignty—all issues for which there are robust theoretical literatures that agricultural historians could draw upon and extend.[55]

There are of course many more possible theoretical approaches that might be of use to agricultural historians. The physical sciences, the humanities, and other realms of the social sciences not mentioned here offer many opportunities for engaging with theory and theorizing. A Web of Science search for any variant of "theory" and "agriculture," unrestricted by discipline or journal, reveals at least 11,928 articles that might help us understand and explain something surprising that we have discovered in our historical research.[56] We might also, once we begin working more directly with theory and theorizing, find ourselves questioning the assumptions upon which existing theories are built. Such questions and approaches could enable agricultural historians to refine and test theory and generate new concepts, frameworks, and theories that other disciplines find useful. Not all agricultural historians will see a need to engage with theory or theorization. But for those who do, rewards await in gaining wider audiences for our contributions, building new insights for our students, and recognizing that most of us are already more theoretically inclined than we might realize.

NOTES

1. The same search applied to the *Journal of Urban History* reveals that 38 of 908 indexed articles (4.19 percent) include a variant of "theory." The search strings used were "theor*" in Topic, [relevant journal title] in Publication Name, and the results were limited to Document Type "article." Thus any article including "theory," "theoretical," "theories," "theorize," "theorizing," or "theorization" would be included in the results.

2. Axel Leijonhufvud, "Time in Theory and History or Why I Am Not a Historian," *Agricultural History* 60, no. 1 (Winter 1986): 84–88.

3. Debra A. Reid, "African Americans and Land Loss in Texas: Government Duplicity and Discrimination Based on Race and Class," *Agricultural History* 77, no. 2 (Spring 2003): 258–92; Laurie Carlson, "Forging His Own Path: William Jasper Spillman and Progressive Era Breeding and Genetics," *Agricultural History* 79, no. 1 (Winter 2005): 50–57; Joseph M. Hodge, "Colonial Foresters Versus Agriculturalists: The Debate over Climate Change and Cocoa Production in the Gold Coast," *Agricultural History* 83, no. 2 (Spring 2009): 201–20; Mark D. Hersey, "'What We Need Is a Crop Ecologist': Ecology and Agricultural Science in Progressive-Era America," *Agricultural History* 85 (Summer 2011): 297–321; Daniel Ott, "Producing a Past: McCormick Harvester and Producer Populists in the 1890s," *Agricultural History* 88, no. 1 (Winter 2014): 87–119; Julie Courtwright, "On the Edge of the Possible: Artificial Rainmaking and the Extension of Hope on the Great Plains," *Agricultural History* 89, no. 4 (Fall 2015): 536–58; Federico D'Onofrio, "The Microfoundations of Italian Agrarianism: Italian Agricultural Economists and Fascism," *Agricultural History* 91, no. 3 (Summer 2017): 369–96.

4. Geoff D. Zylstra, "Stretching Time, Collapsing Space: How New Jersey Market Gardeners Used Technology to Control Production, 1838–1876," *Agricultural History* 87, no. 2 (Spring 2013): 144–69.

5. Robert P. Swierenga, "Theoretical Perspectives on the New Rural History: From Environmentalism to Modernization," *Agricultural History* 56, no. 3 (July 1982): 495–502.

Google Scholar, which indexes more books than Web of Science, lists twenty-five citations of Swierenga's article.

6. Deborah Fitzgerald, Lisa Onaga, Emily Pawley, Denise Phillips, and Jeremy Vetter, "Roundtable: Agricultural History and the History of Science," *Agricultural History* 92, no. 4 (Fall 2018): 569–604.

7. An example of the former is Shane Hamilton, "Distributing Legitimacy: The Politics of Milk in Post–World War II Venezuela," *History of Retailing and Consumption*, **5, no. 1 (2019): 29-50**. An example of the latter is Andrew G. Godley and Shane Hamilton, "Different Expectations: A Comparative History of Structure, Experience, and Strategic Alliances in the U.S. and U.K. Poultry Sectors, 1920–1990," *Strategic Entrepreneurship Journal*, forthcoming 2019.

8. The phrase "all models are wrong, but some are useful" is generally attributed to statistician George Box: "Robustness in the Strategy of Scientific Model Building," in *Robustness in Statistics*, ed. R. L. Launer and G. N. Wilkinson (Waltham, MA: Academic Press, 1979), 201–36. Although in some definitions "models" are considered distinct from "theories," with the former representational and the latter explanatory, the definitions I advance in the next suggestion suggest this is a porous boundary at best.

9. Hayden White, *Metahistory: The Historical Imagination in Nineteenth-Century Europe* (Baltimore: Johns Hopkins University Press, 1973); Hayden White, "The Value of Narrativity in the Representation of Reality," *Critical Inquiry* 7, no. 1 (1980): 5–27; Hayden White, *The Fiction of Narrative: Essays on History, Literature, and Theory, 1957–2007*, ed. R. Doran (Baltimore: Johns Hopkins University Press, 2010).

10. Although outside the scope of this essay, the path blazed by the *Annales* School makes a compelling case for integrating the insights of agricultural history research with the models, frameworks, and theories of sociology and other social sciences; for useful historical overviews of the long dialogue between history and sociology in which the *Annales* school is

situated, see George Steinmetz, "Bourdieu, Historicity, and Historical Sociology," *Cultural Sociology* 5, no. 1 (2011): 45–66; Peter Novick, *That Noble Dream: The "Objectivity Question" and the American Historical Profession* (Cambridge: Cambridge University Press, 1988).

11. Geoffrey Wood, Phillip H. Phan, and Mike Wright, "The Problems with Theory and New Challenges in Theorizing," *Academy of Management Perspectives* 32, no. 4 (2018): 407.

12. Milton Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), 35.

13. Donald A. MacKenzie, *An Engine, Not a Camera: How Financial Models Shape Markets* (Cambridge, MA: MIT Press, 2008), 9–11.

14. Nicolai J. Foss and Niklas L. Hallberg, "Changing Assumptions and Progressive Change in Theories of Strategic Organization," *Strategic Organization* 15, no. 3 (2017): 411.

15. Wood, Phan, and Wright, "Problems with Theory and New Challenges in Theorizing," 408.

16. Richard Swedberg, "Theorizing in Sociology and Social Science: Turning to the Context of Discovery," *Theory and Society* 41, no. 1 (Jan. 2012): 34.

17. David Lowenthal, *The Past Is a Foreign Country* (Cambridge: Cambridge University Press, 1985); William Turkel, *The Archive of Place: Unearthing the Pasts of the Chilcotin Plateau* (Seattle: University of Washington Press, 2008); Mairi Maclean, Charles Harvey, and Stewart R. Clegg, "Organization Theory in Business and Management History: Present Status and Future Prospects," *Business History Review* 91, no. 3 (Autumn 2017): 457–81.

18. Reinhart Koselleck, *Futures Past: On the Semantics of Historical Time* (New York: Columbia University Press, 2004); Paul Ricoeur, *Memory, History, Forgetting*, trans. David Pellauer and Kathleen Blamey (Chicago: University of Chicago Press, 2004). Useful

introductions to the work of Koselleck and Ricoeur include: John Zammito, "Koselleck's Philosophy of Historical Time(s) and the Practice of History," *History and Theory* 43, no. 1 (2004): 124–35; Scott Taylor, Emma Bell, and Bill Cooke, "Business History and the Historiographical Operation," *Management and Organizational History* 4, no. 2 (2009): 151–66.

19. William H. Sewell, Jr, *Logics of History: Social Theory and Social Transformation* (Chicago: University of Chicago Press, 2005). It is perhaps especially instructive that one of the most influential contributions to theories of temporality in organizational studies was co-authored by a historian (JoAnne Yates): Wanda J. Orlikowski and JoAnne Yates, "It's About Time: Temporal Structuring in Organizations," *Organization Science* 13, no. 6 (2002): 684–700. Reflexive social science critiques of entire fields ignoring time and temporality include: David R. Maines, "The Significance of Temporality for the Development of Sociological Theory," *Sociological Quarterly* 28, no. 3 (1987): 303–11; Ann Langley, Clive Smallman, Haridimos Tsoukas, and Andrew H. Van de Ven, "Process Studies of Change in Organization and Management: Unveiling Temporality, Activity, and Flow," *Academy of Management Journal* 56, no. 1 (2013): 1–13.

20. Richard Swedberg, "Before Theory Comes Theorizing or How to Make Social Science More Interesting," *British Journal of Sociology* 67, no. 1 (2016): 5, 9.

21. Richard T. Ely, "Landed Property as an Economic Concept and as a Field of Research," *American Economic Review* 7, no. 1 (Mar. 1917): 18–33; Henry C. Taylor, "Two Dimensions of Productivity," *American Economic Review* 7, no. 1 (Mar. 1917): 49–57; William J. Spillman, "The Agricultural Ladder," *American Economic Review* 9, no. 1 (Mar. 1919): 170–79; Jack R. Kloppenburg and Charles C. Geisler, "The Agricultural Ladder: Agrarian Ideology and the Changing Structure of U.S. Agriculture," *Journal of Rural Studies* 1, no. 1 (1985): 59–72; Lawanda Fenlason Cox, "Tenancy in the United States, 1865–1900: A Consideration of the Validity of the Agricultural Ladder

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22. Sigrid Schmalzer, *Red Revolution, Green Revolution: Scientific Farming in Socialist China* (Chicago: University of Chicago Press, 2016); Courtney Fullilove, *The Profit of the Earth: The Global Seeds of American Agriculture* (Chicago: University of Chicago Press, 2017); Shane Hamilton, *Supermarket USA: Food and Power in the Cold War Farms Race* (New Haven: Yale University Press, 2018).

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24. "Colligation, n.," *OED Online*, Dec. 2018, Oxford University Press, http://www.oed.com/view/Entry/36351; William Whewell, *The Philosophy of the Inductive Sciences, Founded upon Their History, vol. II* (London: J. W. Parker, 1847), 46.

25. C. Behan McCullagh, "Colligation and Classification in History," *History and Theory* 17, no. 3 (1978): 267–84; Andrew Abbott, *Time Matters: On Theory and Method* (Chicago: University of Chicago Press, 2001), 61, 119. This definition of synthesis is Kantian; Whewell's conception of "colligation" was influenced by his reading of Kant. See L. B. Cebik, "Colligation and the Writing of History," *Monist* 53, no. 1 (Jan. 1969): 40–57.

26. Eviatar Zerubavel, *Time Maps: Collective Memory and the Social Shape of the Past* (Chicago: University of Chicago Press, 2004), 8.

27. Donald Worster, "Transformations of the Earth: Toward an Agroecological Perspective in History," *Journal of American History* 76, no. 4 (Mar. 1990): 1087–1106; Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy,*

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28. Swedberg, "Before Theory," 11.

29. Robert M. Grant, "Why Strategy Teaching Should Be Theory Based," *Journal of Management Inquiry* 17, no. 4 (2008): 276, 278.

30. Robert M. Grant and Charles Baden-Fuller, "How to Develop Strategic Management Competency: Reconsidering the Learning Goals and Knowledge Requirements of the Core Strategy Course," *Academy of Management Learning & Education* 17, no. 3 (2018): 322–38.

31. An excellent, critical history of the case study method, its globalization, and its critiques is Arun Kumar, "From Henley to Harvard at Hyderabad? (Post and Neo-) Colonialism in Management Education in India," *Enterprise & Society* 20, no. 2 (June 2019): 366–400. A landmark report produced by the Carnegie Foundation in 2011 sharply criticized American business schools for failing to develop ethics and empathy in students, and recommended the incorporation of history, literature, and humanities subjects into the undergraduate business curriculum: Anne Colby, Thomas Ehrlich, William M. Sullivan, and Jonathan R. Dolle, *Rethinking Undergraduate Business Education: Liberal Learning for the Profession* (Hoboken, NJ: John Wiley & Sons, 2011). Swedberg's promotion of abduction—Charles S. Peirce's concept of an informed conjecture, more instinctual than logical—seems relevant here, for what historical processes of theorizing seem exceptionally well suited to are developing skills of being imaginative, playful, and insightful while *also* seeking logical rigor. Swedberg, "Theorizing in Sociology and Social Science," 14–15.

32. Wood, Phan, and Wright, "Problems with Theory and New Challenges in Theorizing," 408.

33. On transdisciplinarity and interdisciplinarity, see Sally W. Aboelela et al., "Defining Interdisciplinary Research: Conclusions from a Critical Review of the Literature," *Health Services Research* 42 (Feb. 2007): 329–46; Frank Siedlok and Paul Hibbert, "The Organization of Interdisciplinary Research: Modes, Drivers and Barriers," *International Journal of Management Reviews* 16, no. 2 (Apr. 2014): 194–210.

34. Pratima Bansal, "Sustainable Development in an Age of Disruption," *Academy of Management Discoveries* 5, no. 1 (2019): 8.

35. William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991), esp. 268–69; William Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W. W. Norton, 1995); Neil Smith, *Uneven Development:*

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36. "Moving Crops and the Scales of History," Max Planck Institute for the History of Science, https://www.mpiwg-berlin.mpg.de/research/projects/moving-crops-and-scale-history; Fitzgerald et al., "Roundtable," 596.

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38. Claire Strom, "Idiosyncratic Reflections on Ninety Years of *Agricultural History*, Written in Celebration of the Agricultural History Society's One-hundredth-year Anniversary," *Agricultural History* 93, no. 1 (Winter 2019): 139–72; R. Douglas Hurt, "Reflections on American Agricultural History," *Agricultural History Review* 52, no. 1 (2004): 1–19.

39. An example of a historical use of transaction cost theory to explore membership in farm cooperatives is Julie A. Hogeland, "Managing Uncertainty and Expectations: The Strategic Response of U.S. Agricultural Cooperatives to Agricultural Industrialization," *Journal of Co-operative Organization and Management* 3, no. 2 (Dec. 2015): 60–71. A useful introduction to the concepts of transaction cost theory is Naomi Lamoreaux, Daniel M. G. Raff, and Peter Temin, "Beyond Markets and Hierarchies: Toward a

New Synthesis of American Business History," *American Historical Review* 108, no. 2 (Apr. 2003): 404–33.

40. A useful introduction to evolutionary economics is Stephen Lippmann and Howard Aldrich, "History and Evolutionary Theory," in *Organizations in Time: History, Theory, Methods*, ed. Marcelo Bucheli and Daniel Wadhwani (Oxford: Oxford University Press, 2014), 124–46; but the "bible" of the field is Richard R. Nelson and Sidney G. Winter, *An Evolutionary Theory of Economic Change* (Cambridge, MA: Belknap Press, 1982). A good introduction to behavioral economics is Richard H. Thaler, "Behavioral Economics: Past, Present, and Future," *American Economic Review* 106, no. 7 (July 2016): 1577–1600. David Zilberman addresses some of the possibilities of applying behavioral economics to agriculture in "Agricultural Economics as Behavioral Economics," *Berkeley Blog*, https://blogs.berkeley.edu/2016/07/23/agricultural-economics-as-behavioral-economics/.

41. Greta R. Krippner, *Capitalizing on Crisis: The Political Origins of the Rise of Finance* (Cambridge, MA: Harvard University Press, 2011); Jennifer Clapp, S. Ryan Isakson, and Oane Visser, "The Complex Dynamics of Agriculture as a Financial Asset: Introduction to Symposium," *Agriculture and Human Values* 34, no. 1 (2017): 179–83; Tania Salerno, "Cargill's Corporate Growth in Times of Crises: How Agro-Commodity Traders Are Increasing Profits in the Midst of Volatility," *Agriculture and Human Values* 34, no. 1 (2017): 211–22; S. Ryan Isakson, "Food and Finance: The Financial Transformation of Agro-Food Supply Chains," *Journal of Peasant Studies* 41, no. 5 (2014): 749–75; Raj Patel, "The Long Green Revolution," *Journal of Peasant Studies* 40, no. 1 (2013): 1–63.

42. John T. Schlebecker, "The World Metropolis and the History of American Agriculture," *Journal of Economic History* 20, no. 2 (June 1960): 187–208; Cronon, *Nature's Metropolis*; Harry Kitsikopoulos, "Urban Demand and Agrarian Productivity in Pre-plague England: Reassessing the Relevancy of Von Thunen's Model," *Agricultural History* 77, no. 3

(Summer 2003): 482–522; Shane Hamilton, *Trucking Country: The Road to America's Wal-Mart Economy* (Princeton: Princeton University Press, 2008).

43. Key works in global commodity/value chains theory include: Gary Gereffi and Miguel Korzeniewicz, eds., *Commodity Chains and Global Capitalism* (Westport, CT: Praeger, 1994); Gary Gereffi, John Humphrey, and Timothy Sturgeon, "The Governance of Global Value Chains," *Review of International Political Economy* 12, no. 1 (2005): 78–104. Application of the concepts in agricultural history is limited; see, however, Steven Topik, Carlos Marichal, and Zephyr Frank, eds., *From Silver to Cocaine: Latin American Commodity Chains and the Building of the World Economy, 1500–2000* (Durham: Duke University Press, 2006); Casey Lurtz, *From the Grounds Up: Building an Export Economy in Southern Mexico* (Stanford: Stanford University Press, 2019). Sterling Evans, without discussing global commodity chains theory, nonetheless offers important insights on the emergence of transnational agricultural history in "The 'Age of Agricultural Ignorance': Trends and Concerns for Agriculture Knee-Deep into the Twenty-First Century," *Agricultural History* 93, no. 1 (Winter 2019): 4–34.

44. Peter Jackson, Neil Ward, and Polly Russell, "Mobilising the Commodity Chains Concept in the Politics of Food and Farming," *Journal of Rural Studies* 22, no. 2 (Apr. 2006): 129–41.

45. John Bellamy Foster, "Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology," *American Journal of Sociology* 105, no. 2 (Sept. 1999): 366–405; Jason W. Moore, "Environmental Crises and the Metabolic Rift in World-Historical Perspective," *Organization and Environment* 13, no. 2 (2000): 123–57; Edward D. Melillo, "The First Green Revolution: Debt Peonage and the Making of the Nitrogen Fertilizer Trade, 1840–1930," *American Historical Review* 117, no. 4 (Oct. 2012): 1028–60.

46. Julie Guthman, "Neoliberalism and the Making of Food Politics in California," *Geoforum* 39, no. 3 (May 2008): 1171–83; Julie Guthman, *Agrarian Dreams: The*

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47. Levi Van Sant et al., "Historical Geographies of, and for, the Present," *Progress in Human Geography*, In Press (2018): 1–21.

48. Gilbert, *Planning Democracy*; Frederick H. Buttel and Philip McMichael, "Sociology and Rural History: Summary and Critique," *Social Science History* 12, no. 2 (Summer 1988): 93–120.

49. Olaf F. Larson and Julie N. Zimmerman, "The USDA's Bureau of Agricultural Economics and Sociological Studies of Rural Life and Agricultural Issues, 1919–1953," *Agricultural History* 74, no. 2 (Spring 2000): 227–40; Joan M. Jensen, "Good Farms, Markets, and Communities: Emily Hoag and Rural Women as Producers," in *Women in Agriculture: Professionalizing Rural Life in North America and Europe, 1880–1965*, ed. Linda M. Ambrose and Joan M. Jensen (Iowa City: University of Iowa Press, 2017), 34–64; Linda M. Ambrose, Jenny Barker Devine, and Jeannie Whayne, "Revisiting Rural Women's History," *Agricultural History* 89, no. 3 (Summer 2015): 380–87.

50. I critique myself here, for I use the term in the subtitle of my most recent book, as does J. L. Anderson, *Capitalist Pigs: Pigs, Pork, and Power in America* (Morgantown: West Virginia University Press, 2019). The two of us are also largely to blame for making "Power in Agricultural History" the (largely untheorized) theme for the 100th anniversary meeting of the Agricultural History Society, with Anderson serving as President of the society and myself as program chair for the meeting. The exceptional number of responses to the call for papers, however, suggests that many agricultural historians find the concept useful.

51. Pierre Bourdieu, *The Logic of Practice*, trans. Richard Nice (Stanford: Stanford University Press, 1990); Judith Butler, *The Psychic Life of Power: Theories in Subjection* (Stanford: Stanford University Press, 1997); Steven Lukes, *Power: A Radical View*, 2nd ed. (Houndmills, UK: Palgrave, 2005); C. Wright Mills, *The Power Elite* (New York: Oxford University Press, 1956).

52. Gabriel N. Rosenberg, *The 4-H Harvest: Sexuality and the State in Rural America* (Philadelphia: University of Pennsylvania Press, 2015); Gabriel N. Rosenberg, "A Race Suicide among the Hogs: The Biopolitics of Pork in the United States, 1865–1930," *American Quarterly* 68, no. 1 (Mar. 2016): 49–73.

53. Adam D. Sheingate, *The Rise of the Agricultural Welfare State: Institutions and Interest Group Power in the United States, France, and Japan* (Princeton: Princeton University Press, 2001); Theda Skocpol and Kenneth Finegold, "State Capacity and Economic Intervention in the Early New Deal," *Political Science Quarterly* 97, no. 2 (Summer 1982): 255–78; David E. Hamilton, "Building the Associative State: The Department of Agriculture and American State-Building," *Agricultural History* 64, no. 2 (Spring 1990): 207–18.

54. **Alan L. Olmstead and Paul W. Rhode, *Arresting Contagion: Science, Policy, and Conflicts over Animal Disease Control* (Cambridge, MA: Harvard University Press, 2015);** Charles Sabel, Gary Herrigel, and Peer Hull Kristensen, "Regulation under Uncertainty: The Coevolution of Industry and Regulation," *Regulation & Governance* 12, no. 3 (2018): 371–94; Edward I. Balleisen, "The Prospects for Effective Coregulation in the United States," in *Government and Markets: Toward a New Theory of Regulation*, ed. Edward I. Balleisen and David A. Moss (Cambridge: Cambridge University Press, 2009), 443–81; Shon R. Hiatt and Sangchan Park, "Lords of the Harvest: Third-party Influence and Regulatory Approval of Genetically Modified Organisms," *Academy of Management Journal* 56, no. 4 (2012): 923–44.

55. Giraudeau, "Farm as an Accounting Laboratory"; Jennifer Clapp and Doris Fuchs, eds., *Corporate Power in Global Agrifood Governance* (Cambridge, MA: MIT Press, 2009); Tetty Havinga and Paul Verbruggen, "Understanding Complex Governance Relationships in Food Safety Regulation: The RIT Model as a Theoretical Lens," *Annals of the American Academy of Political and Social Science* 670, no. 1 (2017): 58–77; T. A. Gardner et al., "Transparency and Sustainability in Global Commodity Supply Chains," *World Development*, In Press (2018): 1–15; Roy Suddaby, Alex Bitektine, and Patrick Haack, "Legitimacy," *Academy of Management Annals* 11, no. 1 (2017): 451–78; Christina M. Schiavoni, "The Contested Terrain of Food Sovereignty Construction: Toward a Historical, Relational and Interactive Approach," *Journal of Peasant Studies* 44, no. 1 (Jan. 2017): 1–32; Marc Edelman, "Food Sovereignty: Forgotten GeNealogies and Future Regulatory Challenges," *Journal of Peasant Studies* 41, no. 6 (Nov. 2014): 959–78.

56. The search strings used were "theor*" in Topic and "agricultur*" in Topic, with the results limited to Document Type "article."