

ISSUES IN INTERDISCIPLINARY STUDIES
Vol. 37(2), pp. 130-142 (2019)

Theory into Practice: Julie Thompson Klein's Boundary Work and Institutional Change

by

Cathy N. Davidson
Founding Director, The Futures Initiative, and Distinguished Professor,
The Graduate Center
CUNY

and

Bruce B. Janz
Professor, Department of Philosophy, and Co-Director, Center for Humanities
and Digital Research
University of Central Florida

Abstract: In this article, we seek to apply Julie Thompson Klein's supple understanding of typology as both category-making and category-defying to one aspect of her own body of work: her participation in a range of organizations with permeable boundaries. Specifically, we review her contributions to theories of boundary work in interdisciplinary studies and then her applications of those theories to building new academic institutions and networks that mirror and support related goals. We concentrate on Klein's work as a proponent of Digital Humanities (DH) and, in particular, on Klein as a founding member and leader of a boundary-breaking, cross-institutional, and cross-disciplinary alliance, HASTAC (Humanities, Arts, Science, and Technology Alliance and Collaboratory: HASTAC.org), the world's first and oldest academic social network, a participatory, constantly evolving, user-driven online community that has grown to more than 17,000 network members.

Keywords: boundary work, institutional change, interdisciplinarity, networks, participation

Julie Thompson Klein lives at the border. Perhaps it is because she can almost see Canada from where she lives that she always is concerned about what happens when different regimes of knowledge, different political systems, different cultures, and different kinds of practice meet. Perhaps it is because she spent much of her career teaching at Wayne State University, a

great public university nourishing, and nourished by, a city ever on the brink of insolvency and bankruptcy. Whatever the origins of her boundary work, she is keenly aware that borders can be fertile places but can be also sites of enforcement, containment, and constraint. Borders can be places of flow or they can maintain implicit and explicit power relations. Klein's life on the border has never been that of a colonialist, assuming that one dominant system will inevitably overtake and subsume another. She is, rather, interested in the interface as a conducive membrane between two things. For her, a border is a liminal space that, in its ideal form, can foster exchange and creation. To that end, she has spent a career actively working to ensure that institutional structures support boundary fluidity, even against more normative institutional imperatives towards guarding turf and minding gates.

While others in this volume will address various theoretical and intellectual contributions Klein has made throughout her career, we are focusing on what happens when a deep thinker about boundaries has a formative role in helping to create a new kind of collaborative, community-based, cross-disciplinary organization and publishing platform in which boundary work is an integral part of its design and its activist aims. That organization? The Humanities, Arts, Science, and Technology Alliance and Collaboratory (HASTAC). Certainly, her unique insights on crossing boundaries have been echoed in her work with other organizations, such as the Association for Interdisciplinary Studies (AIS), of which she was an early president, and the Science of Team Science (SciTS) organization, which presented her with their 2016 Recognition Award for her work on interdisciplinarity and team science. However, we will focus on how she has worked to design structures that support interdisciplinarity rather than constrain it within the realm of Digital Humanities (DH), and, more specifically, within HASTAC, where her work both extends and is an extension of her work in DH.

From Scholarship to Practice

In her important article "Typologies of Interdisciplinarity: The Boundary Work of Definition," a chapter in the volume for which she serves as co-editor, the *Oxford Handbook of Interdisciplinarity*, Klein (2017) argues that typologies are neither neutral nor static. They reflect political choices of representation by virtue of what is included or excluded, which activities are grouped within a particular category, and how narrow or wide the field of vision is in a spectrum ranging from small academic projects to society at large. (p. 22)

The passage exemplifies Klein's encouragement of activism through scholar-

ship. One of her goals as a scholarly activist has been to think (and invite others to think) through ways to *institutionalize* the permeability of such boundaries as typologies create, a seeming oxymoron that she has turned into a praxis supportive of interdisciplinary endeavor. In the same article, Klein lists multiple terms associated with interdisciplinary endeavor and, by association, border work. For multidisciplinary, there are juxtaposing, sequencing, and coordinating. For interdisciplinarity, there are interacting, integrating, focusing, blending, and linking. Finally, for transdisciplinarity, there are transcending, transgressing, and transforming. What is characteristic about her scholarly stance is that, rather than favor one term and approach over another, Klein generously shows how each term and approach contributes a different and needed nuance, emphasis, or mission to the goal of crossing intellectual borders.

How does one translate scholarship supportive of border crossing and boundary work into institutional design? Klein consistently throughout her long career has championed organizational reforms designed to move institutions toward openness and away from the many tendencies to guard turf, protect territory, and exclude all who do not meet the narrowest definitions of who belongs. Over the course of her career, Klein has envisioned and supported fluid institutional interfaces as complex as Mobius strips with membranes permeable from multiple directions. Through her scholarly research and publications, which have both informed and been informed by her leadership in professional organizations and funding agencies, she has worked to build interdisciplinary institutions that facilitate participation and contribution. Most impressively, she has done this not simply as a theorist but also as one who puts theory into practice by designing, implementing, and supervising an array of complex professional organizations and systems in a way that supports the border work they do.

Experience in Boundary Crossing and Institution Building

As president of AIS and editor of its journal, *Issues in Integrative Studies* (now *Issues in Interdisciplinary Studies*), Klein championed interdisciplinary studies and interdisciplinarity. And in her continuing efforts on behalf of AIS in this, its fourth decade, she still does. Beyond her work for AIS, she has served on more committees and programs and think tanks and task forces on interdisciplinarity than would fill up the vitas of a dozen full professors. She can claim such notable achievements as membership on the National Academies of Science task force on modernizing the National Science Foundation's taxonomy of research categories and the National Academies

of Science task force on Convergence of Life Sciences, Physical Sciences and Engineering and the programming committee of the national Science of Team Science network. And of course she can also claim voluminous publications on interdisciplinarity and transdisciplinarity across many disparate academic fields ranging from the humanities to the hard sciences, in addition serving as co-editor of the University of Michigan Press series *Digital Humanities@digitalculturebooks*. Her leadership has been well recognized by an array of international awards including the Eesteren-Fluck Van Lohuizen Foundation international competition award for new research models, the Kenneth Boulding Award for outstanding scholarship on interdisciplinarity, the Ramamoorthy & Yeh Distinguished Transdisciplinary Achievement Award, and the Joseph Katz Award for Distinguished Contributions to the Practice and Discourse of General and Liberal Education. Hers is a distinguished career of professional boundary crossing and institution building.

For those who are familiar with Klein's achievements, the awards and other recognition underscore the success of her boundary work, often happening at a level barely perceptible to the rest of the world, but nonetheless making borders productive spaces. She is a tireless networker who often makes introductions between individuals, encouraging them to cross borders, too. For example, one of us (Janz) organized conferences in Canada through a now-defunct center called the Centre for Interdisciplinary Research in the Liberal Arts (CIRLA), based at what was Augustana University College (now the Augustana Faculty of the University of Alberta). Klein was a keynote speaker at the 1998 conference, and she helped bring the discussion of the liberal arts in the contemporary university down from the romantic heights of rhetoric to real questions about their place among applied science, technology, and professional programs. Instead of arguing that the liberal arts are the bulwark against the erosion of the classical university, Klein helped everyone in the conference see potential for their own research, amplified in boundary work across all the disciplines of the existing academy. Klein motivated conference participants not only in her keynote lecture but also in conversations at breaks where she connected people across different disciplines and countries by helping them to rethink their approach to collaboration and encouraging them to ask questions at the borders of the safe spaces of their disciplinary methodologies. Boundaries, for Klein, are always creative spaces, offering opportunities for practicing generosity, optimism, and openness to change.

HASTAC and Klein's Visionary Influence

Among her many other achievements, Julie Thompson Klein has had a visionary and sustaining influence on the shaping of what has been called the world's first and oldest academic social network, Humanities, Arts, Science, and Technology Alliance and Collaboratory (HASTAC, pronounced "hay-stack" by its members). Founded in 2002, this innovative online academic community now numbers over 17,000 network members. It combines a vital and remarkably active online presence with annual onsite conferences hosted by volunteer institutions or consortiums of institutions in a given region or area, including three past international conferences (Toronto in 2013, Peru in 2014, Vancouver in 2019).

HASTAC has, from its beginning, existed with a permeable interface allowing any registered user to contribute. It was designed to be structurally dynamic and responsive, on the level of code (a free, open-source content-management system) and on the level of content (any network member can contribute public content to the HASTAC.org site *without prior approval or permission from its leaders*), thus ensuring its permeability. HASTAC not only promotes "dynamic cross-fertilizations" among its members with its permeability but also, as an open and dynamic social platform, allows its users a means by which to work out the ever-changing nature of those cross-fertilizations. Online, HASTAC's social network is built on a Drupal platform, the aforementioned free, open-source content-management system. Drupal, written in PHP (Hypertext Preprocessor) scripting language by the Drupal software developer community, is offered to users at no cost. Similarly, membership in the HASTAC network is free. Once registered to the HASTAC site, one not only becomes a member but also can contribute as long as the content is relevant to the organization's general mission and the user is respectful of community standards. HASTAC's mission is exemplified by two expansive mottos: "Changing the Way We Teach and Learn" and "Difference Is Our Operating System." As both mottos testify, boundary work – testing and redefining – is intrinsic to the mission and structure of the organization.

Older than either Facebook or MySpace, HASTAC was co-founded by Cathy N. Davidson and David Theo Goldberg, Director of the University of California Humanities Research Institute. Meetings of scholars across interdisciplinary fields (before HASTAC had a name) were hosted at UCHRI in 2001. Led by UCHRI's Kevin Franklin, the group conceptualized the design of a new kind of online tool developed specifically to promote inclusion, participation, and constant change and innovation. A new book by wiki

inventor Ward Cunningham and Bo Leuf, *The Wiki Way: Quick Collaboration on the Web* (2001), helped the group to think about how to translate a theory of inclusive scholarly community with permeable institutional and disciplinary boundaries into an online platform that facilitated this model of networked community. No other organization at that time had such an online site. (As a point of historical reference, it might be noted that Wikipedia launched in 2001.) Originally housed at Stanford University, HASTAC.org was developed by a distributed leadership team across many other institutions. Julie Thompson Klein was among the scholars who, early on, helped all involved to think about how emergent digital forms could be used to translate a theoretical commitment to boundary crossing into an online space for work of that sort.

From its inception, HASTAC has been supported by academic institutions in the form of grants, dedicated administrative time, and paid student internships. It also has won support from institutions like the National Science Foundation and private philanthropic organizations. It is costly and labor intensive to maintain and operate the technologically complex Drupal platform and to administer so large and complex an organization, but this support has made that possible. It is important to know that, throughout its existence, HASTAC has never sold user content or information to help defray costs.

In 2005, the HASTAC website moved to Duke University. From 2005 to 2014, HASTAC co-founders Davidson and Goldberg co-directed the Digital Media and Learning (DML) Competitions supported by the John D. and Catherine T. MacArthur Foundation, with HASTAC.org serving as a networking site for the competition and its winners. This grant funding from the DML Competitions helped HASTAC to continue its online innovation. In 2014, HASTAC's administrative homes were Duke and the Graduate Center, City University of New York (CUNY), where Davidson took a new academic position. In 2017, after an open call for a new institutional partner, leadership was shared across the Graduate Center, CUNY and Arizona State University (ASU) with Jacqueline Wernimont becoming HASTAC's co-director. In 2018, HASTAC added a third, jointly-held administrative home at Dartmouth College and, as of 2019, HASTAC is now supported primarily by two institutions, the Graduate Center, CUNY and Dartmouth.

While material support from an array of institutions has thus been crucial to HASTAC's founding and continuing existence, voluntary participation by a constantly evolving cadre of intellectual leaders has been equally important. HASTAC is the rare organization that has been maintained by volunteer leadership that is shared, nonhierarchical, cooperative, and collabora-

tive. Within this loose and voluntary structure, it is impossible to exaggerate the tireless contribution of Julie Thompson Klein. She has been a dynamic, thoughtful force, constantly working with others in the HASTAC community, especially graduate students and junior scholars, to think through and enable the structures a network needs to support true boundary work, not only intellectually but also institutionally.

One example of Klein's innovative thinking is apparent in the 2006 creation of the HASTAC Scholars Program. By then, it was clear that it was time to find a way to share support of HASTAC beyond just one or two institutions, so the leadership began to discuss ways that institutions could support HASTAC without conventional dues collection. Klein was among a group of leaders who brainstormed a way that institutions could support the next generation of scholars dedicated to HASTAC's mission by offering them modest funding, as graduates or undergraduates, to become HASTAC Scholars. Instead of paying institutional dues to HASTAC, institutions would pledge to support undergraduate and graduate HASTAC Scholars through small stipends. These stipends might be used to pay for travel to the HASTAC conference or another conference or workshop. The HASTAC Scholars would become network members who contribute their own ideas to the network and publicize their own research on the website (and gain professional recognition for doing so). The HASTAC Scholars would form collaborative communities across disciplines and institutions and find support, via the HASTAC network, that is sometimes lacking in their own more traditional institutional homes. The plan, which Klein helped to initiate and implement, has worked well. To date, over 1,425 graduate and undergraduate students from more than 400 institutions have been named HASTAC Scholars.

And this is only one example of the many ways in which Klein has served the complex, amorphous, permeable, and seemingly utopic network of HASTAC, working at the forefront of the senior scholars who are changing structures and mentoring younger colleagues, meeting virtually, as the system allows, and at physical HASTAC conferences and other conferences to support the mission of the organization that is so boundary-crossing in content, method, field, and even technology. As noted earlier, Klein served on the first Steering Committee of the organization, and she continues to serve on that committee in the present. She was co-director of the 5th International HASTAC Conference, "Digital Scholarly Communications," held at the University of Michigan in December of 2011. She has also been a tireless consultant to all conference organizers in every imaginable capacity. She has reviewed proposals for every HASTAC conference, from the beginning

to the present; has helped craft the organization's constantly (and intentionally) malleable bylaws; and has served on numerous nominating committees to choose new Steering Committee members. Any number of HASTAC projects have benefitted from her constant, consistent, passionate counsel.

Not only has Klein supported HASTAC with her substantial volunteer service from its founding, but her evolving theories of boundary work have also contributed to this dynamic social network's ongoing development, raising and suggesting answers to important questions. Klein (2017) argues, "ultimately, the question of knowledge cannot be separated from how we talk about it" (p. 32). And the HASTAC system Klein helped to create has helped connect the "what" and the "how," the content (the information being shared) and the platform (the means of sharing that information). From the start, the system has allowed all involved to deal with the most basic questions of all: How does one work with a collective to turn an idea into a complex social organization sustained by a remarkably complex technological system? How does one create and sustain such an organization based on the lofty ambition to help build and not simply reify reputations as traditional academic publishing tends to do? As we know, the *modus operandi* of much academic publication is based on peer review in which standards for reliability are institutionally self-referential: Those who have attained the status of experts serve as peer reviewers for others seeking to publish their work in a given journal. But what might happen if familiar intellectual boundaries were not reinforced with peer review (as in a conventional scholarly journal), but could be breached by anyone who has chosen to become a member of a community of more open-minded scholars? What might happen if the purpose of publication were not to reify reputation – solidify the grounding of the past that brings scholars to the present – but to support, inspire, and propel a new generation of scholars to thrive, to begin the process of learning together, of, eventually, building their own reputations while supporting and being supported by a community of their peers?

In a 2018 interview with HASTAC Scholar Molly Mann, Klein notes how concepts foundational to HASTAC (reflected in the answers to the questions of the previous paragraph) exemplify boundary work of the sort that allows spaces for change within otherwise seemingly intransigent institutions. She notes, "two concepts – 'mobilizing networks' and 'spatializing practices' – illustrate how HASTAC has been fostering positive change" (Mann, 2018). She alludes here to a definition proposed by HASTAC co-founders Davidson and Goldberg in *The Future of Learning Institutions in a Digital Age*: "institutions are mobilizing networks" (Davidson & Goldberg, 2009, p. 4). Klein builds on the idea that members of a community can be freer of

boundaries than the institutions in which they reside. She notes that, within and across academic institutions, there are constantly changing patterns of contact by individuals that result in “horizontal structures that flatten expert authority” and culminate in “a shift from predetermined expert authority to collective credibility, decentering pedagogy, networked learning through social engagement and cooperation, and a conception of learning based on connectivity and interactivity” (Mann, 2018). Klein also connects flattened hierarchy to a second concept, that of “spatializing practices,” advanced by HASTAC co-founder Anne Balsamo (2011), a concept related to “Michel de Certeau’s distinction between ‘place’ [and] ‘space.’ A place such as a university or school has stable boundaries and a fixed location. Space is ‘a practiced place’ created by actions” (Mann, 2018). In her role as one of HASTAC’s leaders, Klein has helped to enable its online academic network as a “practiced place created by actions” (Mann, 2018).

Klein’s Boundary Thinking and Digital Humanities

Klein’s ongoing work with HASTAC is an extension of her work in the field of Digital Humanities (DH). In a 2012 interview with Conor Shaw-Draves, Klein noted that, even before she became a HASTAC leader, she began “making use of digital technologies and new media in [her] classrooms, initially in the Interdisciplinary Studies Program at Wayne State” (Shaw-Draves, 2011). Since becoming a HASTAC leader, Klein has contributed specific DH themes and ideas to HASTAC. In 2006-2007, for example, Klein hosted a local event in the year-long, multi-site international HASTAC In/Formation Year, with a symposium on “Digital Partnerships in Humanities,” featuring the Wayne State University Libraries’ Digital Collections and innovative work in the English Department.

In her recent book *Interdisciplining Digital Humanities*, Klein (2015) notes that her goal is to test the widespread claim that DH is interdisciplinary by examining the boundary work of establishing, expanding, and sustaining a new field (p. 5). She writes about the early computational linguistics in the mid-twentieth century and charts the “sea change” that occurred in DH with the advent of the Internet. Klein notes that, now, DH “is encompassing new digital-born objects, forms of scholarship and publication, new areas such as gaming studies, [and] critique of the impact of the computer on behavior and culture” (Mann, 2018). These are major accomplishments yet, Klein notes (2015), DH still has to overcome infrastructural challenges as well as problems of sustainability given the difficulty of needing to preserve digital content on constantly changing platforms (p. 4). These challenges are

exacerbated by “the weakened funding climate in humanities, conservative policies for publication as well as tenure and promotion, lack of common standards and evaluation criteria, resistance to interdisciplinary innovation, and uneven development across disciplines, fields, and institutions” (Klein, 2015, p. 4). Insistence on stable infrastructure, Klein notes, can be at odds with the “permeability” of intellectual structures key to creative, disruptive, cross-boundary thinking like that represented by DH. DH today, at its best, can exemplify the crossing of many boundaries, including those long thought to divide academe from sectors of the public sphere such as government and industry. Klein points out that, even as the regulatory and bureaucratic structures of the university construct more elaborate systems designed to satisfy the public’s desire to get value for their dollar, DH offers opportunities to look beyond those structures to new kinds of partners doing new kinds of valuable work.

Activating Boundary Space

Klein’s advocacy for boundary work is exemplified, as we have seen, both in her ongoing contributions to HASTAC and in her participation in DH. In these overlapping contexts, she has not merely imagined institutional structures that serve as clearinghouses for information from multiple sources or meeting-places where people can pool resources or exchange ideas, but has also advocated for and actually helped to build spaces that allow for change and creation. In her boundary lands, concepts travel, as do people moving into different disciplinary areas (Bal, 2002; Klein, 2015, pp. 29-30). The boundary work may be between disciplines, but it may also be between regimes of knowledge and practice anywhere they are found. And work at the boundaries does not foreground disciplinary (or interdisciplinary) production at the expense of that which is examined. The work is done in spaces of encounter in which everyone is learning. No longer is the specialist or the expert the only active knowledge-producer. The inflexible boundaries between junior and senior scholar, or student and teacher, give way to collaborative possibilities in which anyone might learn from the knowledge of anyone else. Similarly, the static boundary between the academy and the public also shifts. No longer is the academic the inquirer and the community merely the place under study that yields its secrets more or less willingly. “In-reach” becomes as important as “outreach” and community contributes to as well as benefits from academic knowledge. Finally, no longer is there a firm line between theory and practice, between the “academic” and the “real world.”

In Klein’s understanding, a boundary is an interface – a space where faces

face each other, an “inter-face” of whole human beings, a space of affect as well as intellect. People sometimes mistake the best computer interface for the one that is invisible and seamless, but that erases the boundary space and discourages the work that can happen there. Klein’s boundary spaces look like feedback loops, relationships of reciprocity and synergy, busy with the autopoietic emergence of new structures, new tools, and new communities. In the boundary spaces she promotes, there is no invisibility, but there is permeability, and opportunity for experiment, trial, failure and success, revision and repetition.

HASTAC and other new academic organizations Klein has worked on have in common the preference for creativity over productivity and the preference for asking new questions rather than just extending or refining old ones. Those involved share her commitment to boundary work allowing surprise and play, meant to do much more than simply meet metrics and targets as one might in an intellectual factory. Activating a boundary space for what might come next, but cannot be programmed or predicted, is different from building an intellectual factory. On the other hand, HASTAC and other structures Klein has been influential in creating are still structures. We suggest that, for Klein, boundary work is no Hegelian *Aufhebung*, no rising to a new level of consciousness or thought after the exhaustion of tensions or contradictions between systems of knowledge. Instead, it is work that builds the new upon the old, transcending but not demolishing the old in the pursuit of something grander, more encompassing, more real or true. In this way, she points us to the creation of new structures that will prepare both existing and future academics, and society, to deal with the world to come.

Conclusion

As Julie Thompson Klein argues in her publications and presentations (and conversations) and demonstrates in her practice, boundary work gives us alternative paradigms and structures. Such work is often easier recommended than done, however, and Klein also has been tireless in addressing the forms of institution-building required to scaffold such work and the new forms of knowledge it can produce. As a nonhierarchical network and boundary-crossing organization, HASTAC has grown through the efforts of many people, and continues to draw new people, particularly students and early career academics with innovative ideas who enjoy working in the collaborative space HASTAC provides to discover curricular ideas, pedagogical tools, and technological possibilities, along with other education innovations, and opportunities in the digital humanities. For a scholar of Klein’s

stature to dedicate herself to an organization such as HASTAC, even without the potential for professional reward and recognition, is not only laudable, but almost singular. She embodies a better alternative for a productive career trajectory than that offered more conventional academics by the neoliberal corporatized university. By her work and by her personal and professional example, Klein has inspired countless scholars, senior and junior, and helped to create and sustain spaces – *boundary spaces* – where they can collaborate to make innovation happen and, through that innovation, benefit us all.

Biographical Notes: CATHY N. DAVIDSON is co-founder and co-director of the Futures Initiative and Distinguished Professor in the PhD Program in English, MA Program in Digital Humanities, and MS Program in Data Analysis and Visualization at the Graduate Center, CUNY. She is a cofounder and codirector of HASTAC (Humanities, Art, Science, and Technology Alliance and Collaboratory). She may be contacted at cdavidson@gc.cuny.edu.

BRUCE B. JANZ is Professor in the Department of Philosophy, co-director of the Center for Humanities and Digital Research, and core faculty in the Texts and Technology PhD program, all at the University of Central Florida. He has taught in Canada, the US, Kenya, and South Africa. He may be contacted at Bruce.Janz@ucf.edu.

References:

- Balsamo, A. (2011). *Designing culture: The technological imagination at work*. Durham, NC: Duke University Press.
- Bal, M. (2002). *Travelling concepts in the humanities: A rough guide*. Toronto: University of Toronto Press.
- Davidson, C. N., & Goldberg, D. T. (2009). *The future of learning institutions in a digital age*. Cambridge, MA: MIT Press.
- Jones, Z. M. (Ed.). (2012). Digital scholarly communication: Conference proceedings from HASTAC 2011. Retrieved from <https://www.hastac.org/hastac-conferences/digital-scholarly-communication-conference-proceedings-hastac-2011>
- Klein, J. T. (2015). *Interdisciplining digital humanities: Boundary work in an emerging field*. Ann Arbor, MI: University of Michigan Press.
- Klein, J. T. (2017a). A taxonomy of interdisciplinarity. In R. Frodeman, J. T. Klein, & R. C. Dos Santos Pacheco (Eds.), *The Oxford handbook of interdisciplinarity* (2nd ed.) (pp. 15-30). New York, NY: Oxford University Press.
- Klein, J. T. (2017b). Transdisciplinarity and sustainability: Patterns of definition. In D. Fam, J. Palmer, C. Riedy & C. Mitchell (Eds.), *Transdisciplinary research and practice for sustainability outcomes* (pp. 7-19). New York, NY: Routledge.
- Klein, J. T., Grossenbacher-Mansuy, W., Haberli, R., Bill, A., Scholz, R. W. & Welti, M. (Eds.). (2001). *Transdisciplinarity: Joint problem solving among science, technology, and society*. Basel: Springer AG.

- Leuf, B., & Cunningham, W. *The wiki way: A quick collaboration on the web*. Boston: Addison-Wesley, 2001.
- Mann, M. (2018, January 5). Boundary work and the digital humanities: An interview with Julie Thompson Klein. Retrieved from <https://www.hastac.org/blogs/molly-mann/2018/01/05/boundary-work-and-digital-humanities-interview-julie-thompson-klein>
- Shaws-Draves, C. (2012, February 14). Interdisciplinarity and the digital humanities: Profiling Julie Thompson Klein. Retrieved from <https://www.HAS-TAC.org/blogs/cshawdraves/2012/02/14/interdisciplinarity-and-digital-humanities-profiling-julie-thompson>