

Atoms, Honeycombs, and Fabric Scraps: Rethinking Timelines in the Undergraduate Classroom¹

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TIMELINES are a regular feature of almost all history education. As teachers and students, we create them on chalkboards, white boards, and an increasing number of web-based programs that allow multiple users to collaborate on a timeline's shape. Textbooks offer timelines to accompany the material they cover—chapter-by-chapter, students are told which important events merit inclusion on such a chart. Timelines are, without question, deeply useful. They help students create order out of a mass of information, map the context that surrounds a particular event, and assess cause, effect, and correlation.

Yet timelines can also be limiting. They can rarely capture multiple perspectives on a single event, and they tend to elide the question of authorship—a timeline seems to simply *be* rather than being tied to a person, or a group, with a particular view upon the past. Timelines suggest a certain completeness—especially the versions presented in textbooks—that is at odds with the fragmentary, interpretive work a historian undertakes. It's hard to construct a timeline that adequately shows the influence of ideas over hundreds of years, or which can connect events happening thousands of miles apart. Timelines privilege a Western, linear vision of time over alternate explanations, and, too often, timelines are also dissociated from a sense of place, existing with little reference to landscape or environment.

Both the usefulness and the limits of timelines as a historian's tool came up repeatedly during the ten-week Historian's Workshop class I taught at Knox College during the Winter 2012 term.² Historian's Workshop is a gateway class for History majors and minors, and Integrated International Studies majors. As such, it explores historiography, the philosophy of history, methods, and ethics in order to prepare students to take upper-level research seminars at the next stage of their college careers. Each member of the history faculty teaches the course in a slightly different manner, tracing the historiography of a different field, person, or event. My course focused on the history of the American West; my colleagues trace the historiography of World War II, American slavery, Jesus, and Winston Churchill. Our goal is the same—to allow students to discover, by studying the way historians' understanding of a key figure or subject changes over time, that history is a fluid, culturally constructed, interpretive discipline. It was in light of that goal that I challenged my students to rethink timelines altogether.

My course took Frederick Jackson Turner's frontier thesis as its starting point, and students began the work of critically engaging with a historian's scholarship: what was his argument? What evidence had he used to support his points? How did the information in the footnotes allow the students to enter into conversation with Turner himself? What was useful about his theory, and what weaknesses could they identify in his work? The students found value in his focus on the environment as a key factor in human history, and they stood ready to be persuaded that there were patterns of settlement in U.S. history. They noted, however, that Turner barely included women in his treatment of the past, and that he omitted Native communities, enslaved and free African Americans, Asian and Hispanic immigrants, Canadians, and anyone who moved about the North American continent in a direction other than east to west.³

Why had Turner written what he had? To answer that question, students researched what else was going on in the world during the 1890s in order to construct a collective timeline of the moment. When we constructed the timeline in class, students argued that it should begin in 1865 and stretch to 1900 in order to capture the appropriate context. Students nominated multiple events that they argued were key to understanding the moment in which Turner had worked: Reconstruction; the rise of the KKK; lynchings in the South; the end of treaty-making between the U.S. government and American Indian communities; the Dawes Act of 1887; Wovoka, the Ghost Dance, and Wounded Knee; the completion of the first trans-continental railroad; the Chinese Exclusion Acts; European immigration; the development of multi-line telegraph communication across the United States; electric lighting; the 1893 World's Columbian Exposition; the

Annexation of Hawaii; the Spanish-Cuban-American war. When an item was suggested for inclusion on the timeline, the student nominating the event explained why it was connected to understanding Turner. Out of these moments rose larger conceptual categories—racial anxiety on the part of wealthy, white brokers of power; racial violence meted out against non-white groups to protect a certain vision of the status quo; westward expansion as a key American experience; rapid technological change as fuel for social transformation.

The timeline helped students to better understand Turner's frontier thesis, but it also failed to capture some of what they wanted to express. There was no readily apparent way to render white supremacy or imperialism as ideologies that permeated the span of years under consideration—the best we could do was identify moments where these bubbled up into military action, moments of profound violence against non-white communities, or political machinations abroad. Students knew that women were actively working for property and wage protections in this era, as well as the right to vote, but they couldn't find a direct correlation between those issues and Turner's ideas. The timeline left the students with questions as well as answers—a useful, teachable moment in terms of having them question the tools upon which they had learned to rely as historians-in-training.

As we moved through the term, examining works by the generations of historians who followed Turner—Bolton Pomeroy, Bogue, Smith, Jacobs, Jeffrey, Armitage, Myers, Worcester, Miles, Gitlin, Cronon, Limerick, Basso, and Wilson⁴—students drew several conclusions about the practice of history. Historians were products of the time, place, and culture in which they lived, and so were the works they produced. The professionalization of academic history made for better footnotes and greater dialogue between historians, but many of the groups left out of Turner's vision were continuously ignored—historians picked and chose what was "history" and what was not. New voices were gradually added to older stories, but the older stories proved tenacious—the basic cadences of Western history took decades to change. Eventually, the students questioned the very concept of Western history as a category of historical analysis, struggling instead to find a more nuanced way to express their understanding of place as central to the human effort to make meaning of experience. They wished for a way to capture multiple cultural understandings of what constituted historical significance, and to pay closer attention to time and space.

These ideas bubbled up most irrepressibly during a discussion of Keith Basso's *Wisdom Sits in Places: Landscape and Language Among the Western Apache* and Waziyatawin Angela Wilson's *Remember This!: Dakota Decolonization and the Eli Taylor Narratives* in week seven of the course. For the Western Apache, time is elastic—the moment in which

someone in the present speaks the name of a Western Apache place aloud is the same moment in which that name is first spoken by an ancestor. (More than one student noted that the underlying vision of space/time in the Western Apache worldview was close kin to Einstein's understanding of the same.) Place-names are prompts for longer stories, providing place-meanings for the Western Apache that are culturally particular and which make room for non-temporal powers that might hold sway over the events in the temporal world. Similarly, Waziyatawin Angela Wilson, in her discussion of Dakota history, speaks of the importance of place to Dakota conceptions of time and belonging, and of the necessity of understanding that, for the Dakota, there are powers that exist out of time as well as within it. Basso and Wilson's works provided students with a corrective to Turner's omission of Native communities from Western history and challenged the very idea that "the West" was a useful category for understanding the Dakota or Western Apache past. At the same, time these works returned students to the starting point of our course, to the prioritizing of landscape and environment—of place—in history.

Out of this discussion arose the question of how to do better Western history—if, indeed, we wanted to keep the category at all. What would an ethical, inclusive Western history look like? What were ethical methods and ethical tools? To make these abstractions more concrete, I brought our discussion back to the question of timelines. What would a timeline look like, I asked, if it encompassed more uncertainty, more ideas, and more perspectives on the past? What would it become if it tried to acknowledge that time was fluid, and that there was more than one way to perceive and make order from the past? My students' charge was to design a timeline replacement—to illustrate it, or make a 3-D model—and bring it to class in week nine. Students shared their work with one another on March 2, 2012.

Several of the students tackled the meta-question of "what is history?" with their timeline replacements. Junior Alice Corrigan brought a box of fabric scraps to class that she had culled from the theater department and tipped it onto the desk at the front of the room (see Appendix A). The scraps, she said, represented everything that had ever happened in the past, every story included without qualification. Some of the pieces of fabric were designed to sparkle, or were constructed—like lace—with purposeful holes. Other scraps were damaged and shedding threads. This was, Alice suggested, exactly like stories—some people's stories are well looked after, and others are ignored by people picking through the story-pile for something that looks interesting; some people lie and damage our stories; some stories are stuffed away and ignored; some stories leave a mark upon the other stories they brush against. Alice picked through the

pile, turning over scrap after scrap, shifting the composition of the whole over and over. Her hands were doing the work of a historian, she said, seeing which stories saw the light and which were left alone. She held up an off-cut of scraps that had already been sewn into patchwork and pointed out that we would need to do sleuthing to figure out why someone had thought all the colors belonged together. She held up another where animal-print fabric had been sewn to a piece of cotton speckled with flowers. We might never know why someone thought these two stories belonged together, she pointed out, or whether the creator saw beauty and ugliness in the prints in the way we do today.

Laura Crossley's updated timeline also used fabric to make a point about historical story-telling. Using a cut-up pillowcase and assorted scarves, Laura made a rough, broad-loom weaving (see Appendix B). The resulting textile was irregular and a little messy—by design, Laura clarified, since the business of history is rarely uniform or precise. Some of the strips of fabric in the textile looped back through the warp of the cloth several times; others were left hanging; some were frayed. The totality was history, she said, and the strips were individual stories, or people, or events. As historians, we had the opportunity to decide which would touch and which wouldn't; we could move the strips and twist them, distorting the past or providing a fresh perspective. There were holes where the strips didn't quite meet, suggesting that there is always room for more information, and Laura demonstrated that by pulling any one of the strips from the weaving altogether, the whole would fall apart. That was history too, she argued—without diverse sources, without a commitment to consider every potential voice, we could not make a whole that would hold together in any meaningful way.

Several students concentrated on representing multiple voices in their revamped timelines. Both Erin Majewski and Teagan (who asked that her last name not be used) liked the idea of representing time as a web, with events spilling messily across the page. Erin drew a bubble representation of her idea (see Appendix C). Bubbles could represent events, and the lines between bubbles—the fabric of her web—the consequences of each event as it influenced another. Yet the bubbles might also represent perspectives on a single event and allow historians to capture the give and take between the viewpoints of those involved and those looking back in later years. Bubbles might be connected in as many as four directions or as few as one—the number would be determined, Erin argued, by the question a historian asked of the past, and the particular perspectives a historian was interested in exploring. Teagan's web complemented this idea. (She provided a link to an illustration of a web online.) In nature, no two spiderwebs are ever same, she explained, which made webs the

perfect vehicle for capturing the interplay between a historian and the events of the past—no two historians would build the same web. Teagan demonstrated that a single event could anchor the center of a web, with other events moving away from or toward that center. In class discussion of Teagan's idea, students suggested that the webs could be rolled into funnels. Events that affected multiple people for very different reasons could be located at the tip of the touching funnels, while the profusion of webs would demonstrate how complex the consequences of any one moment were. Using webs could be a useful group exercise for K-12 students, Erin suggested, especially as a cumulative assessment exercise for what they'd learned in a unit or course.

Sarah Zagotta's model of an event pyramid explored many of the same ideas. Since individuals or groups might view the same event in different ways, she argued, she tried to create a visual organizer that would allow historians to codify those differences and record how perspectives changed by time and place (see Appendix D). At the very apex of Sarah's pyramid was a single event—such as Columbus landing in the Americas—and the angled axes that led to the row beneath were designed to accommodate the multiple perspectives different groups might have on that moment. Below the apex were two dots; below that, three. The dots, Sarah argued, were the events that happened in consequence of the first event, viewed from within a different cultural setting or a different place. Each angled axis provided space for a historian to record the reactions of the individuals or groups involved in each event, and to trace connections between those groups. The chart had the benefit, Sarah suggested, of making clear that we only ever saw a fragment of the past—a clear rejection of the traditional timeline's claim to completeness.

The idea that events look different depending on where you are standing—be it physically, ideologically, or temporally—was at the heart of Tina Shuey's work to construct a honeycomb representation of the past (see Appendix E). Tina constructed a cell structure from cut-up plastic page protectors and told the class that each cell represented places or people—the user could choose. A laser pointer (borrowed from the classroom) represented an event in which those people or places were involved. When the light from the laser hit the cells, it dispersed, bounced, and refracted; more importantly, when the laser moved, the result was a different bending of light. The laser could be positioned to hit only a couple of cells, or it could be directed to the heart of the honeycomb. The former created what Tina called “the elementary school textbook” version of history, with the event reaping uncomplicated consequences, whereas the latter was the history in which the class was more interested—multi-faceted, somewhat unpredictable, and constantly changing depending

on a user's perspective. Perhaps most importantly, Tina argued that the seemingly empty space within the cells was actually the place where ideas could change.

Chemistry major Allison Fabrino used the tools of her major to build a new vision of history. Allison brought in plastic representations of atoms and bonds and, after cautioning everyone to remember that she was not creating an accurate molecular structure, showed how a grey atom could be considered a key historical event, and the red and black atoms bonded to it were precursors and/or consequences (see Appendix F). The bonds between atoms were not of uniform length, and the structure was not symmetrical. This, Allison argued, represented the fact that history isn't predictable or neat, but rather an entity created by historians for different purposes at different times. Biology major Tyler Buddell likewise drew on his background in science to communicate a different way of understanding the past. History is fluid, Tyler suggested. Events hit the surface of time like raindrops hitting water, causing deep wells to form. Water finds its level after a disturbance, ensuring that the wells dissipate, but the after-effect of the raindrop/event is to send ripples skimming out in larger and larger concentric circles (see Appendix G). Enough ripples could themselves cause the water to dip in other places, just as the consequences of one event could create another event entirely. Tyler particularly liked the metaphor of fluidity when it came to splashes. Just as a large raindrop could hit water with sufficient power to cause a splash, so could particularly significant events generate smaller events spraying out from center, appearing on the face of time as if unconnected to the large event, but in reality, deeply tied. Tyler provided an illustration of how historians might visualize this, zooming in on a particular well before zooming out to see ripples and splashes. This represented the interest historians have in both details and context.

Tom Courtright shifted the focus from events to ideas, institutions, and individuals. Ideally, he said, his timeline would be 3-D—a tripod with each category as a leg (see Appendix H). Connections between ideas, institutions, and individuals would wind around each leg of the tripod and stretch between them—connections could double back or leap ahead in time, suggesting the repetition of values or patterns in thinking. Tom's alternate timeline captured the idea that events do not occur without human actors, and that human actors are influenced by ideas as much as other events. Jessica (who asked that her last name not be used) similarly conceptualized her new timeline that would capture the repeated importance of key civic, religious, and cultural values, meta-present even as the details of how those values manifested changed over time (see Appendix I).

Robert Niemyer took up the challenge of thinking about the environment in which humans experience events. His parallelogram contained “space”—a visual marker that referenced a place, like St Louis, or a country, like Turkey. Since events would have an impact upon that place to varying degrees, Robert showed this effect by rooting vertical bars of different breadths and depths, representing impact, upon a horizontal axis, representing time (see Appendix J). WWII would, for example, have a different material impact upon St. Louis than on London, England; the fur trade would measure differently in St. Louis than in Paris, France. Robert argued that his timeline provided a way for historians to visually signify the varied importance of events; multiple space-impact timelines, he suggested, could be placed side-by-side to compare and contrast the impact of events around the world.

The students in Historian’s Workshop had a lot of fun both in creating their alternate timelines and in discussing the possible applications of each person’s work. Individually, students had felt empowered to make connections to their other classes and extra-curricular pursuits: theater, creative writing, chemistry, biology, and education. Collectively, they took great pride in the work they had produced, and in the potential real-world application of their ideas. At several points in class discussion, students hypothesized how one of the alternate timelines could be used in a course, in mapping research ideas, or in assessing K-12 student learning. They clearly intended to use the models and timelines again.

Pedagogically, this exercise required students to synthesize a term’s worth of learning and allowed me to assess the depth of their historical thinking skills. How complex was their analysis of the practice of history? How deeply had they considered the way that other students might be helped to think of history as evidence-based and interpretive? What did they emphasize, and how did that reflect their assessment of the biggest challenges in contemporary historical scholarship? The students in the class demonstrated that they both understood the meta-themes of the course and could connect them to issues of audience, professionalism, and ethics. Allowing students to illustrate their timelines or create a 3-D model accommodated variations in their artistic strength while also emphasizing communication methods other than those encompassed by a paper. Indeed, several students who had struggled with clear writing during the term demonstrated keen historical thinking in this exercise—being able to talk about their ideas and enter into conversation about their alternate timeline forms provided opportunity for them to share their higher-level critical thinking skills with others.

I will pilot some of the students’ strategies for new timeline forms in the American History survey course I’ll be teaching in the Spring 2012 term.

After students have completed secondary source reading about the Seven Years War, I plan to divide them into small groups and provide each with a pile of fabric scraps. We'll discuss Alice Corrigan's idea that the fabric represents history, then each group will be charged with doing a historian's work—selecting the fabric that best represents the stories they want to emphasize about the war. Together, students will weave a broad-loom textile representing voices and events from the era under examination, just as Laura Crossley did. Students will be asked to show their finished textile, complete with named threads, to the rest of class, and to explain the choices they've made. I have high hopes that the exercise will act in concert with other strategies in the course to emphasize the constructed, interpretive nature of history with entry-level non-majors, as well as with majors and minors preparing for upper-level work.

Notes

1. Thank you to the students of HIST 285: Historian's Workshop, Winter 2012 term, for permission to discuss their work. Thanks also to Tim Schmeling, the TA for the course, and to Elise Fillpot and Jennifer Dowell, who offered valuable feedback on earlier versions of this essay.

2. Knox College is a small liberal arts school located in west-central Illinois. At the beginning of the 2011-2012 academic year, the college had 1,406 degree-seeking students, 809 of whom identified as female, and 597 as male. 308 of the students were U.S.-born students of color, while 128 were international students. All statistics provided by the Knox College Office of the Registrar.

3. Frederick Jackson Turner, *The Significance of the Frontier in American History* (New York: Henry Holt and Company, 1921).

4. Wilbur R. Jacobs, "Frederick Jackson Turner: Master Teacher," *Pacific Historical Review* 23, no. 1 (February 1954): 49-58; Allan G. Bogue, "'Not by Bread Alone': The Emergence of the Wisconsin Idea and the Departure of Frederick Jackson Turner," *Wisconsin Magazine of History* 86, no. 1 (Autumn 2002): 10-23; Herbert R. Bolton, "The Epic of Greater America," AHA Presidential Address, *American Historical Review* 38, no. 3 (April 1933): 448-474; Earl Pomeroy, "Toward a Reorientation of Western History: Continuity and Environment," *The Mississippi Historical Review* 41, no. 4 (March 1955): 579-600; Allan G. Bogue, "Social Theory and the Pioneer," *Agricultural History* 34, no. 1 (January 1960): 21-34; Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth* (Cambridge, MA: Harvard University Press, 1950); Everett Dick, "Sunbonnet and Calico: the Homesteader's Consort," *Nebraska History* 47 (March 1966): 3-13; Julie Roy Jeffrey, *Frontier Women: "Civilizing" the West, 1840-1880*, revised ed. (New York: Hill and Wang, 1996); Sandra L. Myres, *Westering Women and the Frontier Experience, 1800-1915* (Albuquerque, NM: University of New Mexico Press, 1982); Susan Armitage, "Women and Men in Western History: A Stereoptical Vision," *Western Historical Quarterly* 16, no. 4 (October 1985): 382-395; Donald Worster, "New West, True West: Interpreting

the Region's History," *The Western Historical Quarterly* 18, no. 2 (April 1987): 141-156; Patricia Nelson Limerick, "What on Earth is New Western History?" in *Trails: Towards a New Western History*, ed. Patricia Nelson Limerick, Clyde A. Milner II, and Charles E. Rankin (Lawrence, KS: University of Kansas Press, 1991), 81-88; William Cronon, George Miles, and Jay Gitlin, "Becoming West: Toward a New Meaning for Western History," in *Under an Open Sky: Rethinking America's Western Past*, ed. William Cronon, George Miles, and Jay Gitlin (New York: W. W. Norton, 1992): 3-27; Keith M. Basso, *Wisdom Sits in Places: Landscape and Language Among the Western Apache* (Albuquerque, NM: University of New Mexico Press, 1996); Waziyatawin Angela Wilson, *Remember This!: Dakota Decolonization and the Eli Taylor Narratives* (Lincoln, NE: University of Nebraska Press, 2005).

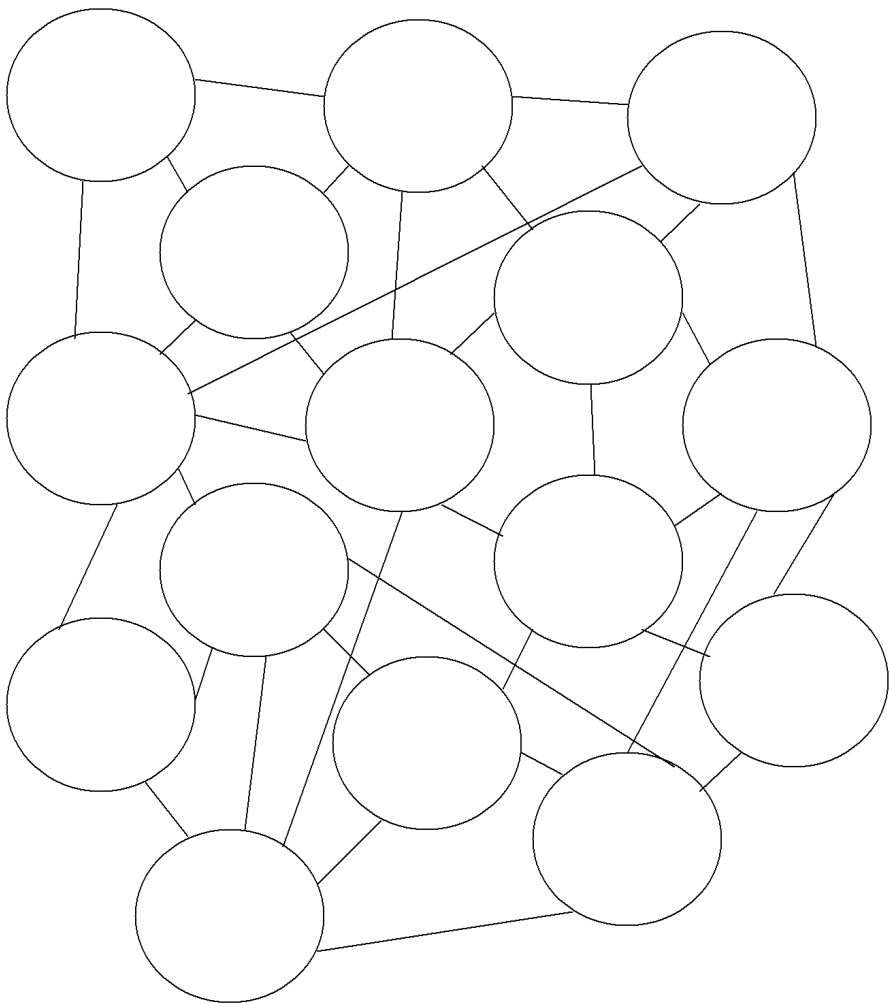
Appendix A: Alice Corrigan's Fabric Scraps



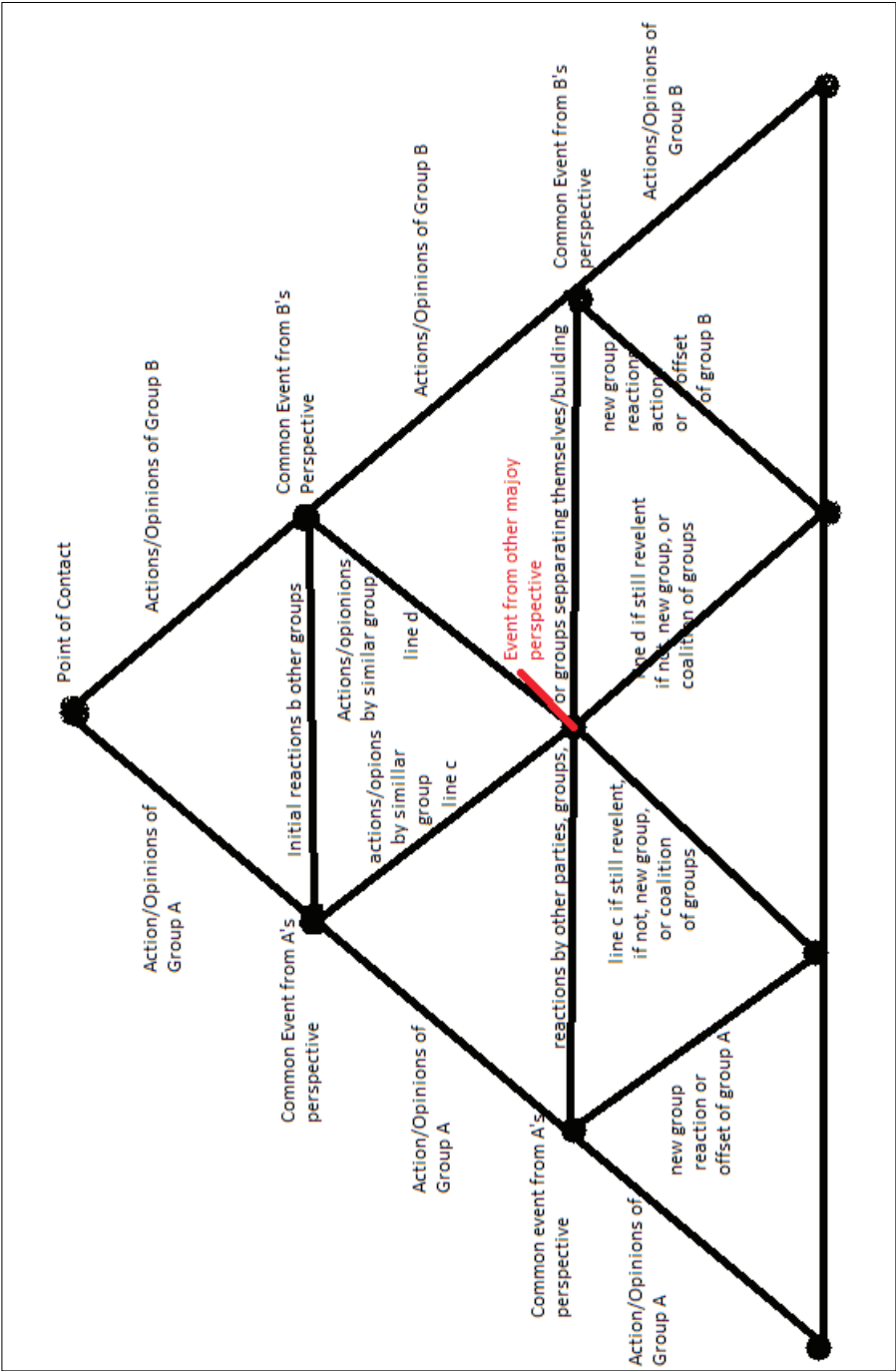
Appendix B: Laura Crossley's Broad-Loom Weaving



Appendix C: Erin Majewski’s Bubbled Time Web

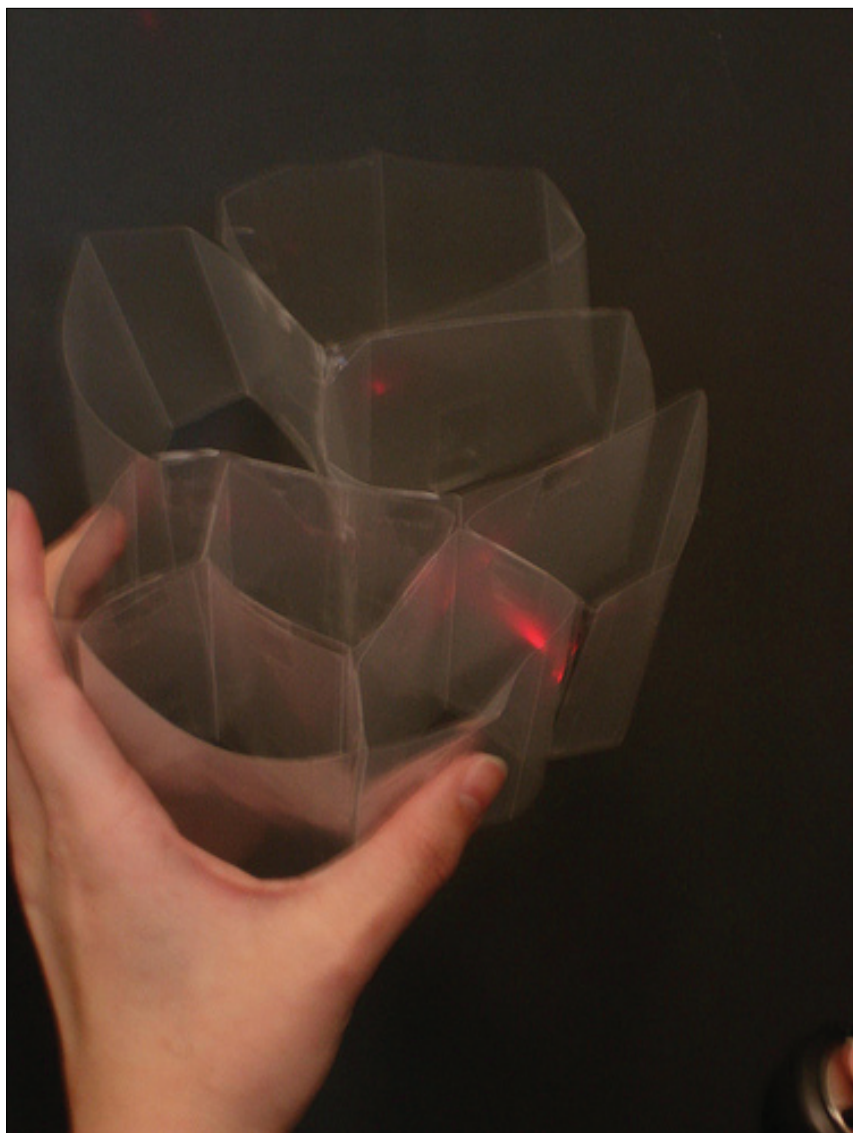


Appendix D: Sarah Zagotta’s Event Pyramid

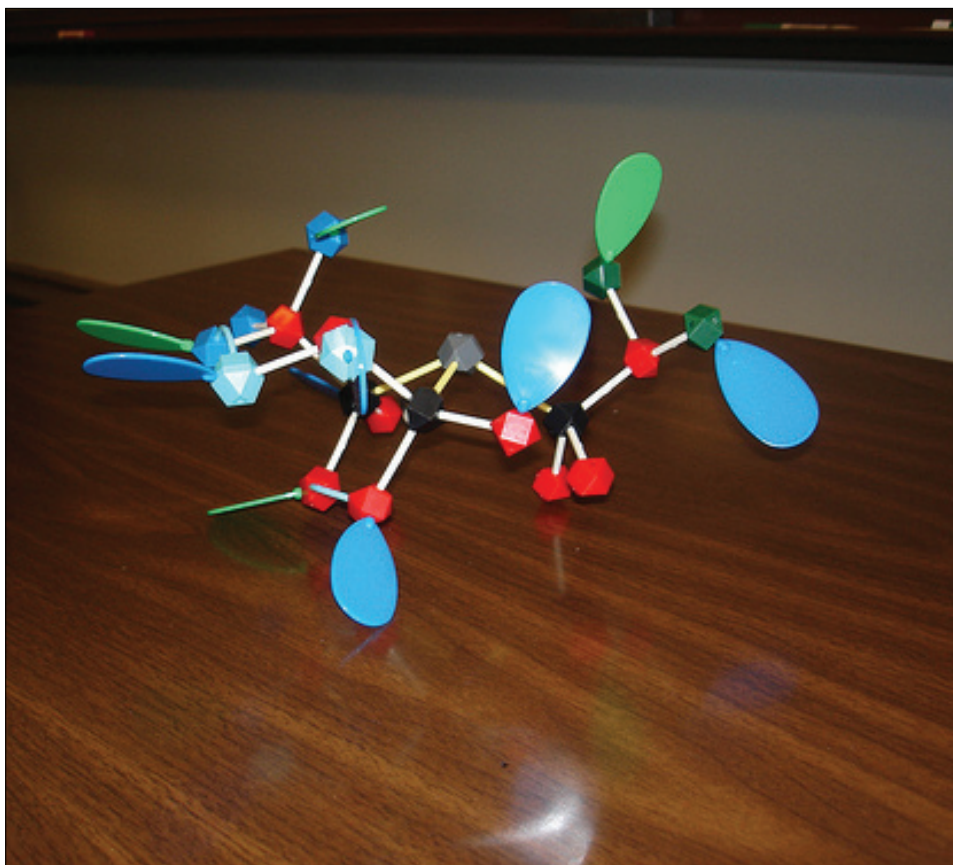


Appendix E: Tina Shuey's Honeycomb Cells

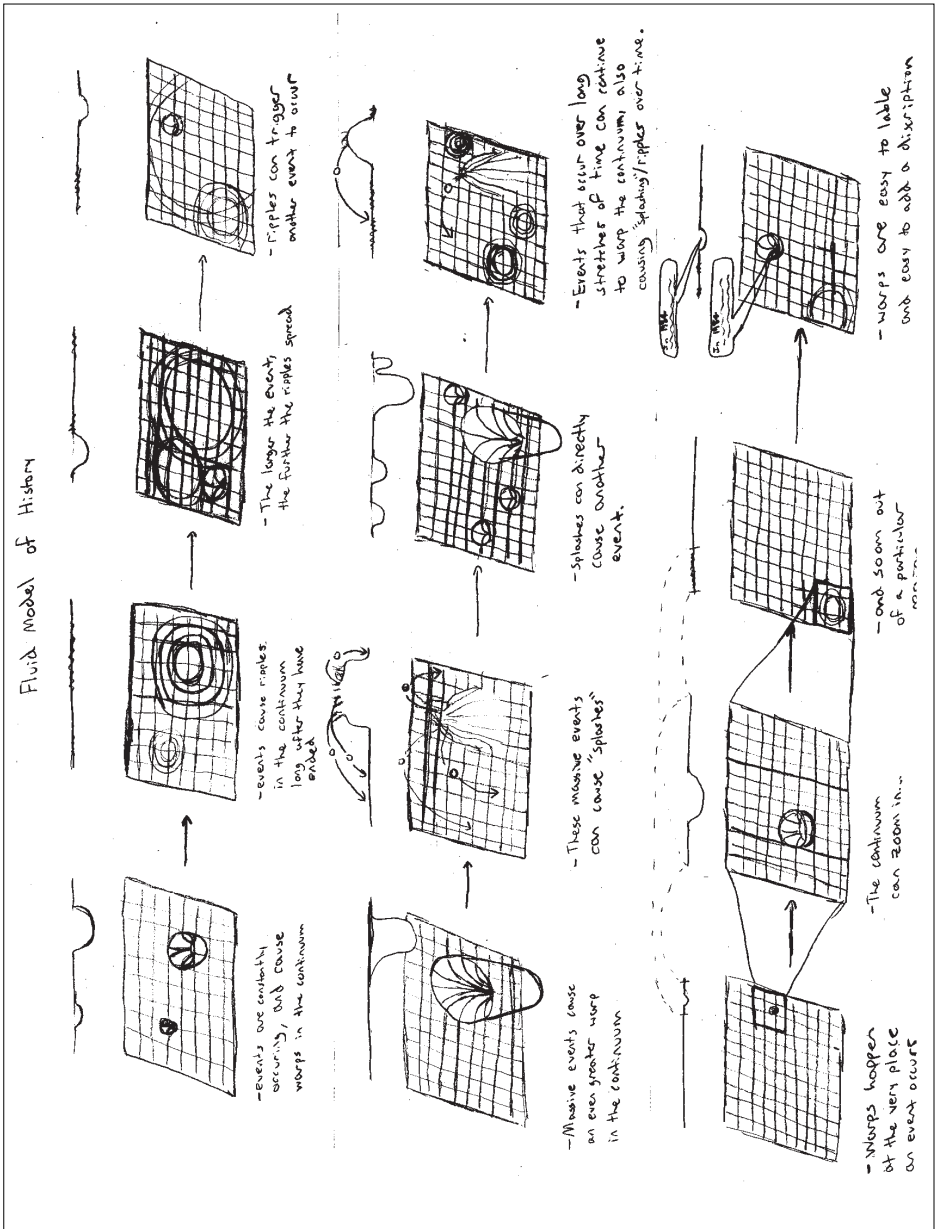




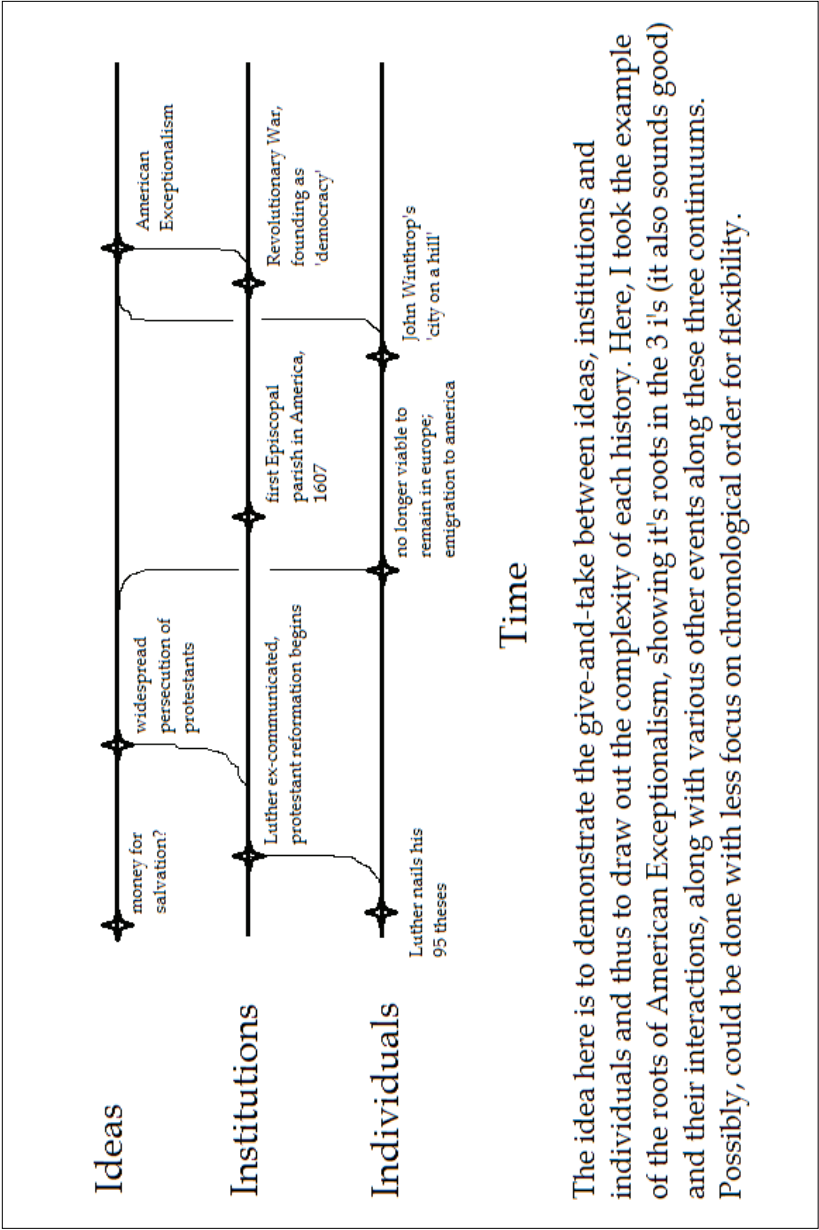
Appendix F: Allison Fabrino's Atomic Bonds Structure



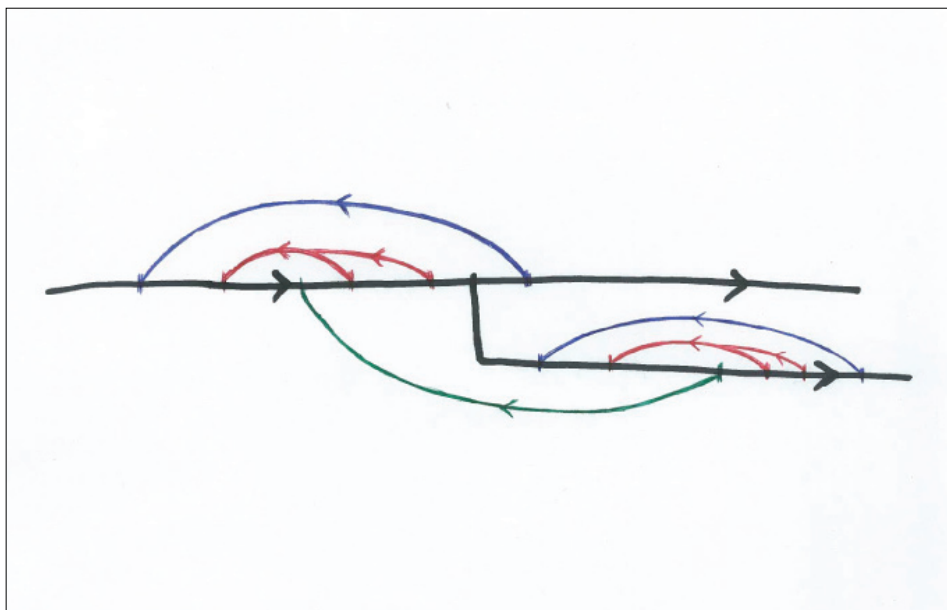
Appendix G: Tyler Buddell's Fluid Model



Appendix H: Tom Courtright’s Timelines



Appendix I: Jessica's Meta-Timeline



Appendix J: Robert Niemeyer's Multiple Space-Impact Timelines

