Teaching Twitter: Re-enacting the Paris Commune and the Battle of Stalingrad

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ON NOVEMBER 14, 2012, the Israeli Defense Force (IDF) tweeted "We recommend that no Hamas operatives, whether low level or senior leaders, show their faces above ground in the days ahead."[1] On the same day Georgy Zhukov, Deputy Commander-in-Chief of the Red Army charged with the defence of Stalingrad tweeted, "Men of the 39th Guards Rifle Division are defending the Red October steel factory. Relief is on the way comrades!" In a striking juxtaposition, the IDF's November 2012 offensive in Gaza, broadcast on Twitter, Facebook, and YouTube, coincided with a Twitter simulation of the Battle of Stalingrad conducted in my course on the Second World War.

The IDF's use of social media illustrates the importance of New Media as primary sources. Born-digital sources are, in fact, already old enough to fall into the domain of traditional, albeit recent, history. Bulletin Board Systems date from the 1980s. The European Organization for Nuclear Research (CERN) launched the first website and server in 1990. Websites and the new digital media are cultural artefacts. Archivists and librarians now view their preservation as essential. The U.S. Library of Congress is in the process of creating an archive of all public tweets. As Gayle Osterberg, the Library's Director of Communications, explained, "As society turns to social media as a primary method of communication and creative expression, social media is supplementing, and in some

cases supplanting, letters, journals, serial publications and other sources routinely collected by research libraries."[2] To the list of languages needed to interrogate sources, the programming languages SQL and Perl will soon be as important to historians as learning German, French, or Latin.

As historians, how do we help prepare students to practice the craft in this new digital environment? As a field, digital humanities is still in formation. Generally, historians have prioritized digitizing existing written and print documents. Another focus for many historians has been the use of computer games in the classroom.[3] To what extent does an instructor use New Media or personal computer (PC) games to achieve learning outcomes that are incidental to these tools? Or is it the case that these tools are used to achieve outcomes specific to the digital medium? For example, one of the learning outcomes for my course on the Second World War was to "Understand how nations mobilized economies and populations for total war." This could be achieved through lectures and readings, certainly, but a few evenings playing *Hearts of Iron III*, Paradox Interactive's immersive computer simulation of the Second World War, might also contribute to this learning outcome. Computer games are engaging, but are they effective, analytically sound teaching tools? This is a key question in history because counterfactuals, which are central to computer games, are of questionable value in the classroom. Nevertheless, recent research has demonstrated the pedagogical strengths of PC games.[4]

Rather than digitized sources or games, my concern was to have students work with born-digital sources. Twitter was a compelling choice for a number of reasons. It has received attention because of the role it played in mobilizing protestors during the Arab Spring. In addition, the sheer volume of tweets—over 300 million per day—and the banal nature of most pose interesting challenges to historians. They must learn to sift through the detritus. Finally, Twitter's serial nature lends itself to a diachronic format. The tweets of "Real-Time World War II," available at <https://twitter.com/RealTimeWWII>, illustrate this. Murat Demirbas at Niagara University tweets chronologically for his U.S. history courses (@NUHIS199), with links to primary sources added. The British Channel 4 recently used Twitter (@dday7), television broadcasts, and a comprehensive website for its "D-Day: As it Happens" program.

The site Twhistory.org provided the template for my project. This site acts as a clearing house for Twitter re-enactments of historical events. The structure is simple. Students create Twitter accounts for historical characters. Then, using primary sources, they tweet "in real-time." I conducted two Twitter re-enactments. The first was for a class on the Paris Commune. The simulation took place from March 26 through March 30,

2012. This week coincided with the first municipal elections of the 1871 Paris Commune and attempts by Parisian mayors to mediate between the government in Versailles and the Communards. The second simulation was for my class on the Second World War. This simulation ran from November 12 through November 16, 2012. This was the week just before the Soviets launched Operation Uranus, a huge counter-attack that resulted in the capture of the German 6th Army in 1942. Yet ironically, it was during this period that the German army finally seized key objectives on the west bank of the Volga River. Both courses were upper division with relatively small enrolments of about thirty students. Neither simulation used Twhistory.org, however. I wanted to use Twitter for the re-enactments so that we could see what type of followers or attention the simulations attracted naturally, with minimal or no promotion. This left open the possibility that our tweets, like most, would have a limited audience.

Historical re-enactments are fraught with epistemological and methodological issues. They are conjectural, fictive, and dominated by non-historians.[5] Nevertheless, instructors can embrace the epistemological problems and turn them into a central issue for class discussion. Rather than delegitimizing the simulation, these issues can be used to introduce students to post-modern critiques of history writing in general. In addition, re-enactments are immersive and require no wardrobe budget when done electronically. Finally, when carefully planned and assessed, re-enactments promote student engagement and active learning.

Twitter Simulation: Design and Assessment

For both the Paris Commune and the Battle of Stalingrad simulation, I used the following three objectives:

1. Gain proficiency with Twitter and different tools for data mining.
2. Appreciate the challenges and opportunities that social media present as source materials for historians.
3. Use the re-enactment to increase understanding of the Paris Commune/Battle of Stalingrad.

Each simulation also had a content specific objective. For the Paris Commune, it was to "Understand the implications of social media for the mobilization of protest movements; use classic theories of revolution to contextualize the role of social media." For the Battle of Stalingrad, the additional learning objective was to "Understand the implications of social media for mass mobilization and propaganda." For each simulation, I required students to tweet twice a day for one week, submit a short

biography (250 words) of a historical figure, and compose a three-page essay discussing the use of Twitter for historical re-enactments. In addition, students submitted a bibliography of primary sources. Overall, the assignment comprised 15% of the total grade for each course.

With non-traditional assignments, it is important to provide clear expectations and transparency about how student work will be assessed. Students were required to base their tweets on primary sources. Their grade was based on the plausibility of tweets, the extent to which tweets reflected specific events, and the use of primary sources reflected in the content of their tweets. I encouraged students to think of tweets as roughly falling into one of three categories: direct, first-hand tweets—for example a Communard tweeting about the fall of Courbevoie; indirect, second-hand tweets, such as Zhukov tweeting about the capture of a factory; and "ideational" tweets illustrating inferred expectations, attitudes, and opinions.

Setting up the Twitter accounts was a straightforward process. For each simulation, I provided a list of historical figures. However, in addition to well-known historical figures, I added generic figures such as "Jeanette the Baker" and "Boris the Red Army Soldier." Tweets still needed to be based on primary sources, but adding ordinary characters to the simulation made the simulation a closer approximation of contemporary uses of Twitter. Each character in the simulation required a Twitter account, which in turn requires an e-mail address. Thus, the first step was to create an e-mail account for each character. I reserved a computer classroom and divided this task among students. They used Yahoo.com to create the e-mail accounts and then created their Twitter accounts. As a security precaution, Twitter prevents the same IP address from creating multiple accounts in a short time span, so some students had to create the accounts from a different location later that day. Students posted the account information (usernames and passwords) in the private forum of the course Moodle site.

A key structure of the simulations was that no student was locked into a single historical figure. Students were free to tweet with any account. This had several benefits. First, students were able to retain anonymity while tweeting. Students could also experiment with different figures and use different sources. Invariably, some historical figures—e.g., Bismarck or Zhukov—were more popular than others. Sharing the account information allowed everyone in the class to tweet as towering historical figures or obscure individuals. Each student submitted hard copies of their tweets at the end of the simulation so the instructor was able to assess the tweets for individual grades. Of course, because the account information is accessible to the class, the instructor could also

tweet anonymously if so inclined. The initial session in the computer classroom served as a tutorial for students without any experience with Twitter. I paired inexperienced students with veteran users. Twitter's interface is intuitive and anyone with basic computer skills will be able to get a handle on it in a few minutes.

As soon as some Twitter accounts were operational, students started tweeting using a specific hashtag for each simulation. For the Paris Commune simulation, we used #pariscommune. For the Battle of Stalingrad simulation, we used #stalinsim. Hashtags were an essential component of the simulations. They function as keywords. By including the respective hashtag for each simulation in every tweet, students were able to gather all the tweets for the simulation. Twitter allows you to follow multiple users to receive all of their tweets. By following everyone that was using the hashtag for the simulation, every historical figure soon had a subscription to everyone else tweeting in the simulation. Most importantly, the hashtag offered the potential for Twitter users outside the simulation to follow it. The initial tweets in the computer classroom thus established the simulation network, but it also propagated the hashtag to potentially millions of Twitter users. A key issue for the simulation was what, if any, notice the simulation would attract from outside users. Furthermore, if the simulation did attract outside followers, how did they find it among the millions and millions of daily tweets? The training session in the computer classroom concluded with a discussion of Twitter etiquette. I instructed students to tweet in character. A question arose about possible interaction with non-participants. Insofar as tweets remained in character, I left it to the discretion of the students whether or not to engage with commentators external to the simulation.

Tweeting the Paris Commune

The biggest concern for students regarding this simulation was the availability of primary sources in English. However, the recently published *Communards: The Story of the Paris Commune, As Told by Those Who Fought for It* provided a comprehensive collection of sources.[6] The website Marxists.org also offers a good collection of sources. Finally, the students made use of Prosper-Olivier Lissagaray's contemporary account, *History of the Commune of 1871*.[7] Crucially, these sources were specific enough that students could use them to tweet for specific days.

The training session in the computer classroom took place on March 26. Students created about a dozen accounts initially and began tweeting to propagate the hashtag #pariscommune. An example of the propagation of tweets are the three by Georges Clemenceau shown in Figure 1.

Figure 1: Tweets from "Georges Clemenceau" during the Paris Commune unit.

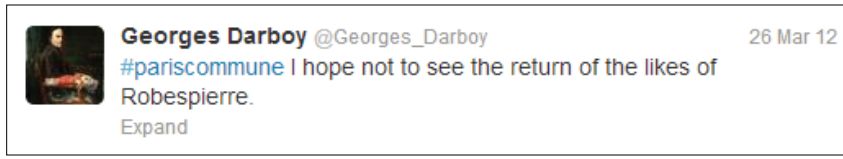

Figure 2: Tweet from "Georges Darboy" during the Paris Commune unit.

Figure 3: Tweets from "Georges Clemenceau" during the Paris Commune unit.

Later that day, the students began to tweet as part of the simulation. An interesting phenomenon manifested itself on the first day of the simulation. The highly visible and instantaneous nature of the tweets resulted in an immediate increase in their quality. Trite tweets with little reference to information from primary sources appeared alongside tweets that demonstrated serious engagement with the material. The qualitative difference of the tweets was glaring in some cases. As a

Figure 4: Tweets from "Adolphe Thiers" during the Paris Commune unit.

result, the quality of the tweets was soon self-regulating. A feedback loop was created. Students increased the time and effort they put into tweets. Compare the tweet from the Archbishop of Paris on the first day of the simulation (Figure 2) with those from Georges Clemenceau a few days later (Figure 3).

The first Clemenceau tweet in Figure 3 refers to the Ligue républicaine des droits de Paris, an organization Clemenceau helped form to mediate between the Commune and the government.

The simulation used thirty-one historical figures and one fictitious persona (Jeannette the Baker). Adolphe Thiers, the conservative leader of the French government, was the most popular figure to be used by the students. The tweets, authored by multiple students, did a good job of portraying the hostility and insecurity of the French government in the initial week after it had fled Paris (Figure 4).

Figure 5: Tweets from "Raoul Rigault" during the Paris Commune unit.

Raoul Rigault, a twenty-five year old Communard of the Blanquist faction, was another popular choice. Rigault was a militant revolutionary who was instrumental in implementing "The Law of the Hostages" in April

Figure 6: Tweet from "Adolphe Thiers" during the Paris Commune unit.

Figure 7: Tweet from "Adolphe Thiers" during the Paris Commune unit.

1871 after the Thiers government had killed captured Communards. The Archbishop of Paris, Georges Darboy, was the most prominent hostage taken by the Communards and he was later executed by them in the final week of the Commune. The students tweeting as Rigault did their best to portray this young militant (Figure 5).

Significantly, within one day of its commencement, the simulation began to attract outside users of Twitter. This is all the more notable considering that every Twitter account used in this simulation started without any previous tweets and no established followers or contacts of any sort. By the end of the second day, the students were conducting limited exchanges with the outside followers (Figure 6).

Some Twitter users outside the simulation commented on the presence of artists among the Communards. Students responded in character as Adolphe Thiers (Figure 7).

The Twitter account for Louise Michel, a prominent female Communard, had eight followers beyond the simulation network by day three. In some cases, simulation tweets were retweeted by the outside users. Retweeting is the most efficacious way to create Twitter networks. By retweeting, a Twitter user forwards a tweet to everyone within his or her network. The forwarded tweet contained information for the historical figure's account as well as the hashtag #pariscommune. The potential growth of a network in this way is exponential.

There were strong indications that other Twitter users beyond those subscribed to Louise Michel or others used the hashtag to follow the simulation. The Twitter tool at Mentionmapp.com maps a Twitter network

of users connected by hashtags, replies, and retweets. Figure 8 shows a Mentionmapp visualization of the connections between the account of Adolphe Thiers and the hashtag #occupywallstreet.[8]

Outside users created this connection by retweeting at least one of the Commune tweets and adding the #occupywallstreet hashtag. On March 28, just two days in to the simulation, users searching the Twitter hashtag for the Occupy Movement could have potentially found their way to our simulation. Twitter identifies and promotes hashtags or users that are trending. The Commune simulation never achieved trending status. Nevertheless, our class was impressed that other Twitter users became aware of it within twenty-four hours of it launching.

How did other Twitter users discover this simulation given that it began in a self-contained network of users and was not promoted on any website? The key was in the hashtag #pariscommune. A member of the Occupy Movement in Chicago evidently conducted a search using this hashtag and found our tweets. This user then retweeted some of the tweets and that drew in more followers. The students were quick to understand the implications of this for real-world mobilization, such as had occurred during the Arab Spring.

The Paris Commune Twitter simulation accomplished its learning objectives decisively. Students delved into primary sources in order to author tweets that accurately reflected events. Thirty students generated over sixty tweets a day. The rapid-fire nature of the tweets communicated a sense of the revolution unfolding in real-time. It was easy to see how Twitter can function either as the pedestrian mouthpiece of the quotidian or as a powerful tool to mobilize revolutionary networks.

Tweeting the Battle of Stalingrad

Drawing on the experience of the Paris Commune Twitter simulation, I conducted a second simulation the following semester. I used the same structure with one significant addition. For the Battle of Stalingrad simulation, I created a website. I decided to use a free, easy-to-use web design program called Joomla![9] The website was, and continues to be, hosted at www.stalingrad.ie. The class already made use of a Moodle site, but the Joomla! site provided a number of additional benefits. To begin with, the website gave students an opportunity to become familiar with basic web design software. Joomla! provides a simple way to publish websites that are attractive but also functional. Anyone with basic IT skills similar to those required to be proficient with the Microsoft Office suite can use it.[10] The website also allowed the students to understand the nature of domain names. The Battle of Stalingrad is, of course, popular on the

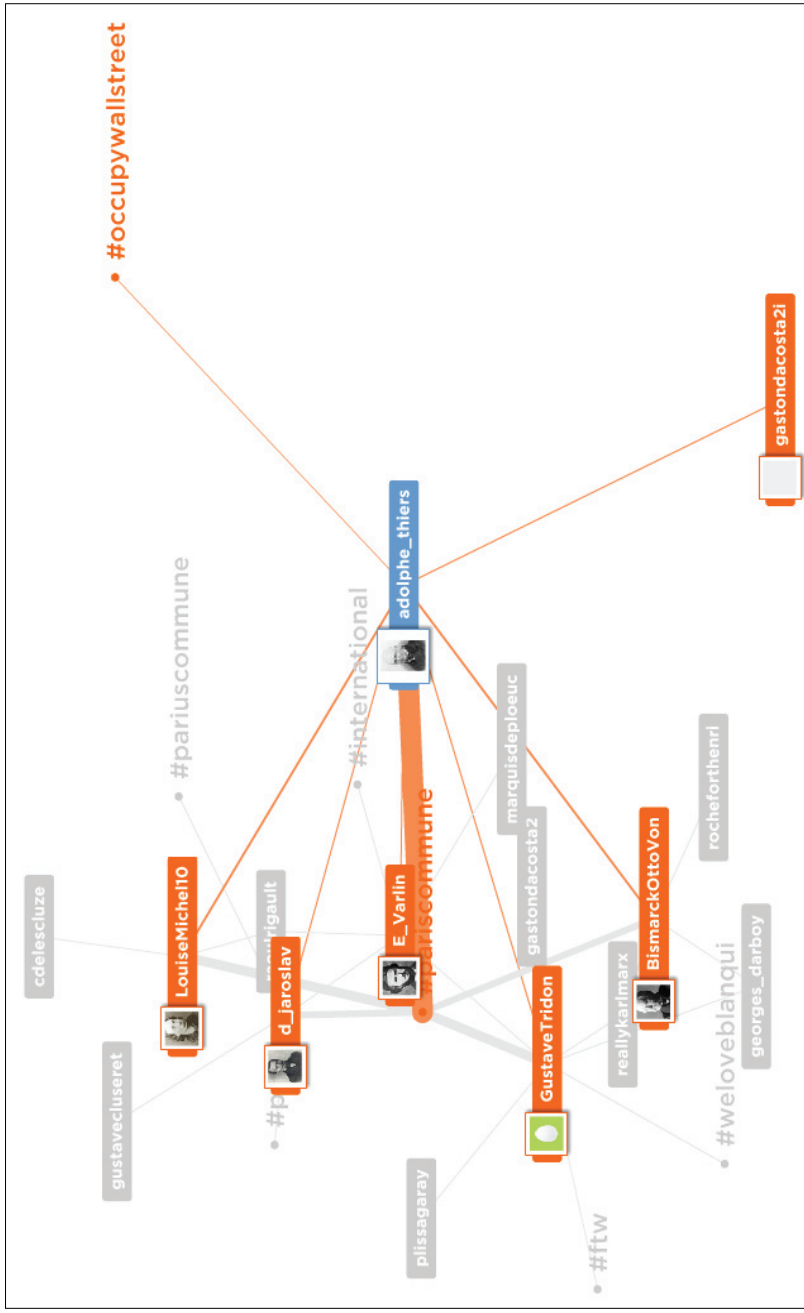

Figure 8: Mentionmapp visualization of connections between adolphe_thiers account and hashtag #occupywallstreet.

Figure 9: Tweets from "Andrey Yeryomenko" during the Battle of Stalingrad unit.

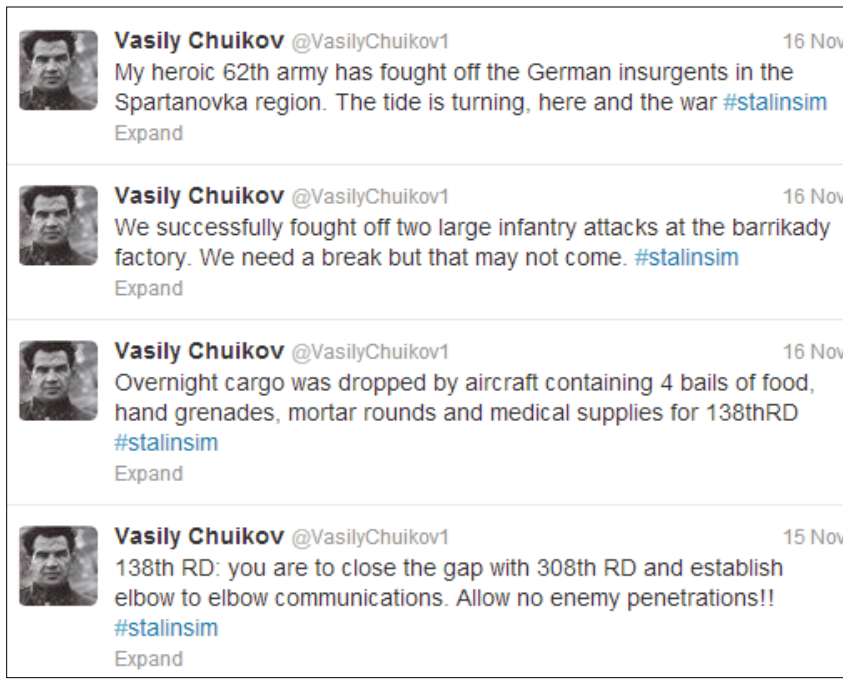

Figure 10: Tweets from "Vasily Chuikov" during the Battle of Stalingrad unit.

Internet and there are very few unclaimed domain names associated with it. However, Ireland has strict protections in place over the .ie domain. Anyone wishing to register an .ie site must provide detailed information and submit physical evidence of Irish residency to the Irish Domain Registry (IDR) at www.iedr.ie. The IDR also prohibits the second-hand sale of .ie domains, so there is little motivation to "park" domain names as potential sources of revenue. The process itself, then, provided a valuable lesson to students about state control over Internet content. The website had an embedded Twitter feed set to a hashtag, which allowed people to follow the simulation from the Internet without logging on to Twitter. Finally, because the course Moodle site was restricted, a website offered a place for people outside the university to learn about our simulation.

Like the previous simulation, the Battle of Stalingrad simulation began with an introductory session in a computer classroom. After setting up accounts, students began to propagate the hashtag #stalinsim. Much like the German decision to attack Stalingrad, this was a strategic error. I had decided on this hashtag because the hashtag #stalingrad is commonly used on Twitter by Parisians referring to Stalingrad métro stop. As a result of our unique hashtag, this simulation remained undiscovered beyond the participating students and a few of their friends. In retrospect, it would have been much better to use #stalingrad and let our simulation tweets fall into the mix. Nevertheless, the website itself has received a modest amount of traffic.

As with the Commune simulation, sources were a primary concern. The work of David M. Glantz proved invaluable. His translation of operational reports from Soviet officers during the battle enabled students to author tweets that reflected the situation on the ground.[11] Some of the tweets for Andrey Yeryomenko, the Soviet commander of the Southeastern Front, provide an indication of the level of detail contained in Glantz's sources (Figure 9).

The tweets for Vasily Chuikov, the Soviet commander of the 62nd Army, also illustrated a high level of engagement with Glantz's work (Figure 10).

The students also made use of a number of other primary sources from the Internet and a host of memoirs from participants in the battle. Unfortunately, the Stalingrad simulation did not attract the same level of outside attention as the Paris Commune simulation.

However, the Gaza offensive of the Israeli Defense Force during mid-November 2012 coincided with the running of this simulation. In a series of tweets, YouTube broadcasts, and Facebook posts, the IDF antagonized Hamas. Running side-by-side with our Twitter simulation, the IDF's propaganda campaign presented a teachable moment. I had been stressing

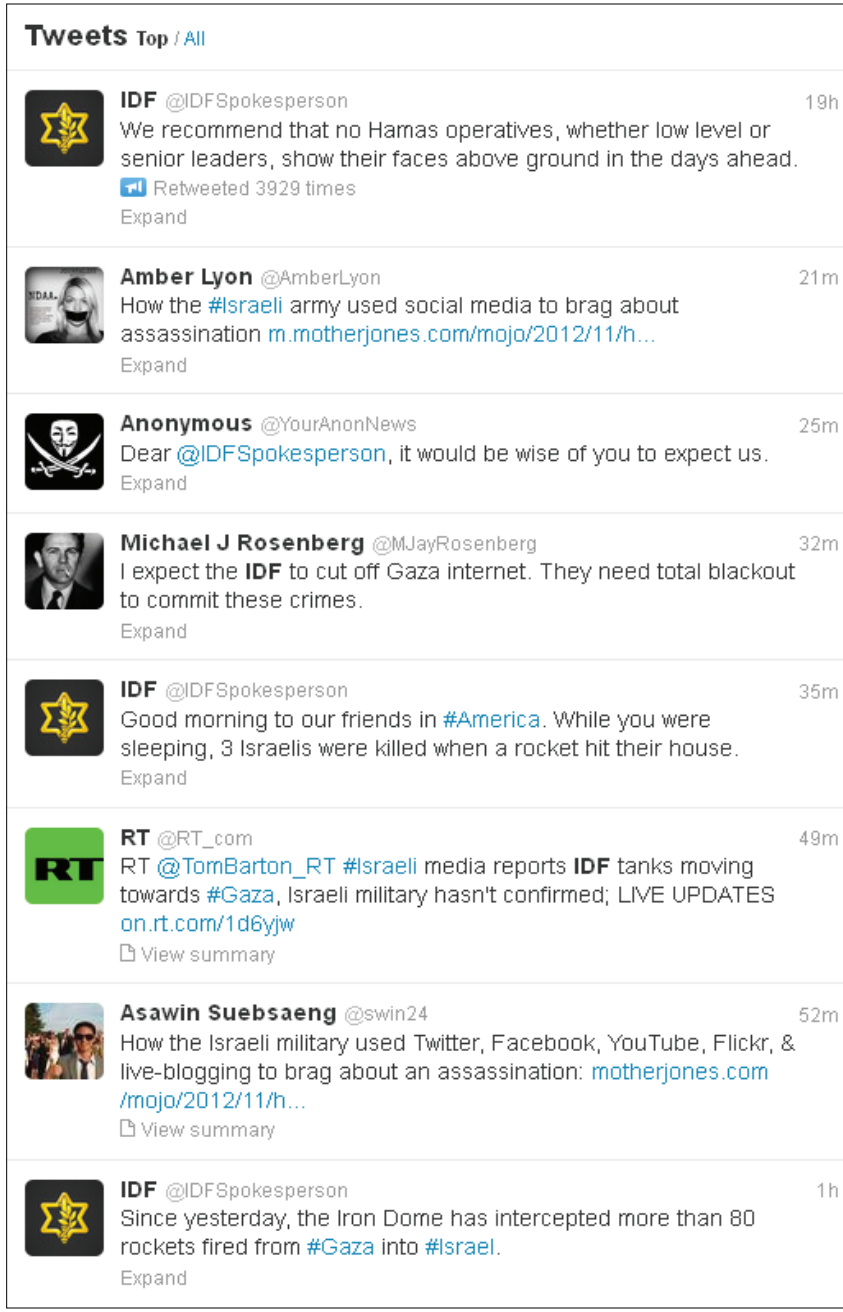

Figure 11: Tweets in response to Israeli Defense Force November 14, 2012 message.

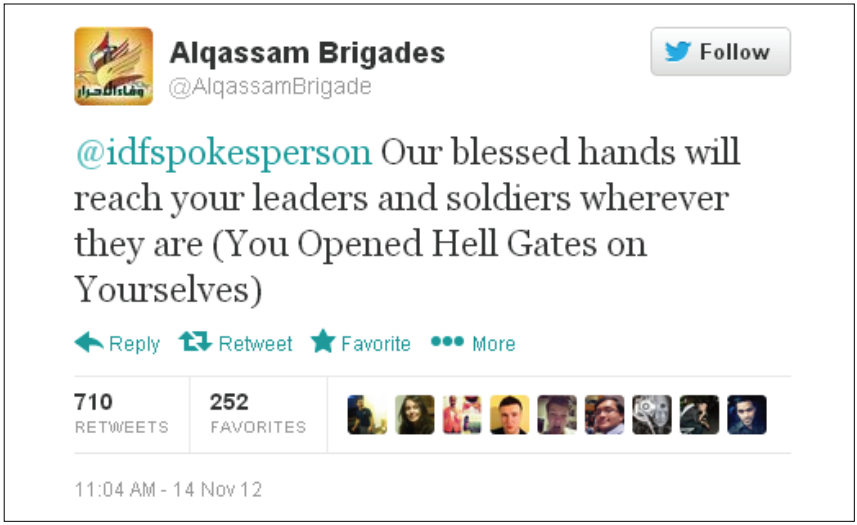

Figure 12: Tweet in response to Israeli Defense Force November 14, 2012 message.

the relevance of the assignment because of the importance of Twitter and other born-digital sources. I hoped students would appreciate the Twitter simulation not just as a "fun" and non-traditional assignment, but also as an introduction to a cultural field that is a primary domain of research. Some students were sceptical. Yet the juxtaposition of our simulation with the IDF tweets was striking. The side-by-side tweets of the IDF and our simulation both described combat conditions, bragged, and taunted. The IDF provided a living example of the use and significance of born-digital sources. The IDF tweets began on November 14, 2012, with a warning to Hamas leaders. They provoked an immediate outcry on Twitter (Figure 11).

Note the use of hashtags (#America, #Gaza, #Israel) by the IDF. On the same day, the IDF used YouTube to post a video of an attack that killed Ahmed Jabari, a Hamas leader.[12] The ten-second clip showed Jabari's car driving down a street in Gaza being struck by a missile. Hamas used Twitter to respond (Figure 12).

As we can see in the above tweets, soon after the IDF began its New Media offensive, the hacktivist group Anonymous also declared its intention to retaliate.

The New Media propaganda exchange between the IDF, Hamas, and Anonymous occurred simultaneously with combat operations and used English. It was the first of its kind. Anonymous has since launched a series of cyber attacks against Israeli government websites. Lior Tabansky,

a cyber security expert at Tel Aviv University, dismissed as ineffectual a series of distributed denial of service (DDOS) attacks by Anonymous in early April 2013, explaining, "It's more of an annoyance, and if they do manage to intimidate sites into submission, the victory will be one of public relations."[13] Tabansky perhaps misses the point, but certainly, the IDF does not: from now on, the public relations battle is a key component of any military offensive. Likewise, the born-digital sources of this battle will be essential to its history. Students in the Stalingrad simulation contemplated this while authoring their own fictional tweets for a battle that had occurred seventy-one years earlier.

Conclusion

I had designed the simulations in an attempt to have students confront the challenges and opportunities that New Media will present to historians. They achieved their objectives and proved to be extremely popular as well. The sheer volume of tweets poses the biggest obstacle to historians. Applications for creating "Twitter walls," and sites such as Mentionmapp Snapbird, or other fee-based services offer some analytical tools that can help scholars. This is a nascent industry and many of the tools require that you be logged in to the Twitter account you want to analyze. Accessing older (more than a few weeks) tweets with these tools can also be problematic. Tweets can be deleted by their authors; YouTube videos can be taken down. The Library of Congress Twitter archive is not yet operational. Even when it is accessible, this archive will require software capable of data mining billions of tweets. As the Library's January 2013 report stated, "It is clear that technology to allow for scholarship access to large data sets is lagging behind technology for creating and distributing such data. Even the private sector has not yet implemented cost-effective commercial solutions because of the complexity and resource requirements of such a task."[14]

The students participating in these two simulations had an opportunity to come to grips with the problems confronting historians and social scientists when working with New Media. Yet there are reasons to be optimistic. Historians are increasingly working with New Media. A reliance on digitized sources is no longer a source of opprobrium. Students already use a number of strategies to increase efficiency when working with digital media. The ability to electronically search the full text of books and articles is one such shortcut. Professional historians employ some of the same strategies as their undergraduate students. Digital photography, online finding guides, as well as outright digitized primary sources are taken for granted by many academic historians. It is important that students engage

with the digital environment in ways that mimic the expedients, trends, and practices of professionals.

It is also possible to combine work with born-digital sources with issues relating to "metadata" or "Big data"—the trillions of daily electronic traces left behind by people as they send e-mails, shop online, browse the Internet, use a GPS, or generally interact with technology. Governments and corporations can mine these data to glean personal information about individuals. The sociologist Kieran Healy's essay "Using Metadata to Find Paul Revere" illustrates how data mining metadata would have been used by the British crown to delineate the network of revolutionaries in Boston in 1772.[15] A basic network analysis reveals Revere as the most central and active revolutionary. Healy, writing in the voice of a Crown official, concludes:

> If a mere scribe such as I—one who knows nearly nothing—can use the very simplest of these methods to pick the name of a traitor like Paul Revere from those of two hundred and fifty four other men, using nothing but a list of memberships and a portable calculating engine, then just think what weapons we might wield in the defence of liberty one or two centuries from now.

From tweets to ATM withdrawals, people are leaving behind a digital palimpsest of data that future historians will pore over and reassemble layer by layer, chronologically and spatially.

There was one other outcome to the two simulations. Student feedback was overwhelmingly positive. To my surprise, however, many of the students stressed the vocational advantages of working with New Media. These were history students who do not plan on pursuing a career in teaching. Nor do they intend to pursue graduate study in history. They pointed out that their training as historians equipped them with superior writing and research skills, a deep understanding of narrative and chronology, and knowledge of vicious and altruistic acts spanning centuries of human experience. According to their conclusions, this skill set makes historians superior content providers/discoverers. What they lack are the technical skills and experience to work with New Media. These simulations were an introduction. Their relevance will increase as more search tools became available for Twitter. Students will be able to practice data mining on the simulation tweets and then apply this experience to real-world research. Based on the feedback I received from students, they will become a staple of my courses.

Notes

1. IDF (IDFSpokesperson), "We recommend that no Hamas operatives, whether low level or senior leaders, show their faces above ground in the days ahead." 14 November 2012, 10:22 a.m., tweet. The tweet is reproduced in Figure 11.
2. Erin Allen, "Update on the Twitter Archive at the Library of Congress," 4 January 2013, <http://blogs.loc.gov/loc/2013/01/update-on-the-twitter-archive-at-the-library-of-congress/>.
3. Jeremiah McCall, *Gaming the Past: Using Video Games to Teach Secondary History* (London, United Kingdom: Routledge, 2011); Andrew McMichael, "PC Games and the Teaching of History," *The History Teacher* 40, no. 2 (February 2007): 203-218.
4. Jeremiah McCall, "Navigating the Problem of Space: The Medium of Simulation Games in the Teaching of History," *The History Teacher* 46, no. 2 (November 2012): 9-28; Kevin Kee, Shawn Graham, Pat Dunae, John Lutz, Andrew Large, Michel Blondeau, and Mike Clare, "Towards a Theory of Good History Through Gaming," CHR Forum, *The Canadian Historical Review* 90, no. 2 (June 2009): 309.
5. Alexander Cook, "The Use and Abuse of Historical Reenactment: Thoughts on Recent Trends in Public History," *Criticism* 46, no. 3 (Summer 2004): 487-496; Vanessa Agnew, "History's Affective Turn: Historical Reenactment and Its Work in the Present," *Rethinking History* 11, no. 3 (September 2007): 299-312.
6. *Communards: The Story of the Paris Commune, As Told by Those Who Fought for It*, ed. and trans. Mitchell Abidor (Kettering, OH: Erythros, 2010). This text is also available as a Kindle edition. Our class was fortunate to have six Kindles with this text made available to share by the university library.
7. Prosper-Olivier Lissagaray, *History of the Commune of 1871*, trans. E. M. Aveling (London, United Kingdom: The British Library, 2010).
8. The visualization also shows that some students misspelled the hashtag.
9. Joomla! is technically known as a Content Management System (CMS), <http://www.joomla.org>.
10. The author, who is by no means a programming expert, taught himself Joomla! in a few days by watching instructional videos on YouTube.
11. David M. Glantz, "The Struggle for Stalingrad City: Opposing Orders of Battle, Combat Orders and Reports, and Operational and Tactical Maps. Part 2: The Fight for Stalingrad's Factory District—14 October-18 November 1942," *Journal of Slavic Military Studies* 21, no. 2 (2008): 377-471.
12. The video, "IDF Pinpoint Strike on Ahmed Jabari, Head of Hamas Military Wing," posted by idfnadesk, is available on YouTube at <http://www.youtube.com/watch?v=P6U2ZQ0EhN4> as of May 2014. The video has been viewed almost five million times. The IDF has left open the comments section of this video—an interesting decision. The IDF currently has 525 videos posted on YouTube.
13. David Shamah, "On Eve of Attack, Israel Preparing for the Cyber-Worst," *The Times of Israel*, 5 April 2013, <http://www.timesofisrael.com/on-eve-of-attack-israel-preparing-for-the-cyber-worst/>.
14. Library of Congress, "Update on the Twitter Archive (White Paper)," January 2013, <http://www.loc.gov/today/pr/2013/files/twitter_report_2013jan.pdf>, 1.
15. Kieran Healy, "Using Metadata to Find Paul Revere," 9 June 2013, <http://kieranhealy.org//blog/archives/2013/06/09/using-metadata-to-find-paul-revere/>.