



Open BUK: Digital Labor, Media Investigation and the Downing of MH17

Matt Sienkiewicz

To cite this article: Matt Sienkiewicz (2015) Open BUK: Digital Labor, Media Investigation and the Downing of MH17, *Critical Studies in Media Communication*, 32:3, 208-223, DOI: [10.1080/15295036.2015.1050427](https://doi.org/10.1080/15295036.2015.1050427)

To link to this article: <http://dx.doi.org/10.1080/15295036.2015.1050427>



Published online: 03 Jul 2015.



[Submit your article to this journal](#)



Article views: 412



[View related articles](#)



[View Crossmark data](#)



Citing articles: 2 [View citing articles](#)

Open BUK: Digital Labor, Media Investigation and the Downing of MH17

Matt Sienkiewicz

This article considers the unique forms of digital labor that emerged in the wake of the downing of Malaysian Airlines flight MH17 over Donetsk, Ukraine in July of 2014. Whereas such investigations traditionally rely on expert analysis and strict information control, the Ukrainians took an unconventional, open-source approach to the case. By releasing key pieces of video evidence on social media, the Ukrainian government recruited a vast roster of skilled online analysts to work on its behalf without expending any financial resources. Placing this user activity in the context of scholarly studies of both fan labor and citizen surveillance, the paper argues that social and economic aspects of online culture enabled Ukraine to benefit significantly from the discourse produced by unpaid workers. Ultimately, the output of these laborers played a key role in counteracting Russia's use of global broadcasting and expensive online propaganda to dominate international debate surrounding MH17.

Keywords: Digital Labor; Citizen Journalism; Social Media; User Generated Content; Ukraine

By July of 2014, Ukraine was a profoundly divided nation. After months of spectacular protests and violent clashes, the Kiev-based Euromaidan movement had gained major concessions. President Viktor Yanukovich, who protestors accused of playing the puppet to Vladimir Putin's master, lived in exile across the Russian border. A new executive, Petro Poroshenko, presided over a surprisingly functional government. The nation's constitution reverted, more or less smoothly, to its pre-Yanukovich form. Euromaidan had succeeded in reforming Ukrainian politics without, as many feared, destroying Ukrainian sovereignty. The western part of the country appeared ready to rebuild.

The same could not be said in the east. Crimea, a part of Ukraine since 1954, was all but lost, with the Russian Federation annexing the region unilaterally. The

Matt Sienkiewicz is an assistant professor. Correspondence to: Matt Sienkiewicz, Communication Department, Boston College, Room S455, 140 Commonwealth Avenue, Chestnut Hill, MA 02476, USA; email: matt.sienkiewicz@bc.edu

This article was originally published with errors. This version has been amended. Please see Corrigendum (<http://dx.doi.org/10.1080/15295036.2015.1099953>).

ISSN 1529-5036 (print)/ISSN 1479-5809 (online) © 2015 National Communication Association
<http://dx.doi.org/10.1080/15295036.2015.1050427>

situation to the north in Lugansk and Donetsk was equally complicated and even more violent. Pro-Russian separatists in these border regions mounted massive, effective attacks on Ukrainian military and government installations. Militias in the two regions declared independence from Kiev, establishing the Lugansk People's Republic (LPR) and the Donetsk People's Republic (DPR), respectively, in April. Citing Ukrainian intelligence reports, Poroshenko accused the LPR and DPR of using Russian military equipment and personnel in prosecuting attacks against his nation's soldiers and civilians (Birnbaum, 2014).

It is within this politically and militarily murky context that Malaysian Airlines Flight MH17, a passenger jet, was shot down over Hrabove, Donetsk on July 17, 2014. All sides of the conflict—Ukraine, Russia and the separatists—acknowledged the tragedy of the situation. A quick consensus also emerged in identifying the weapon at fault, with most reports stating that an S-11 BUK missile had struck the aircraft mid-air (Mendick, 2014). Every other conceivable detail, including the party responsible, became a point of bitter contention. The ensuing days brought a war of words, with Russia swiftly denying any involvement (Davidson & Yuhus, 2014). Eventually, Moscow would point the finger at incompetent, or perhaps nefarious, Ukrainian fighter pilots (AFP, 2014). Ukrainian officials took the opposite tact, condemning the attack as yet another “provocation” on the part of terroristic, Moscow-supported separatists (Finley, 2014).

One day after the crash, July 18, the Facebook page of Ukrainian Interior Minister Aven Avakov entered into this discourse with a bold, yet cryptic, act of communication. The centerpiece of the post was a short, curious video. In it, a road, dimly lit, sits momentarily vacant. Trees rustle in the fore and background. A billboard looms, mostly obscured. Five seconds in, a military truck rolls by, moving left to right. The camera shakes and pans to keep the vehicle on screen. After a quick zoom, the truck exits the frame and the clip, all 13 seconds of it, ends. To the average Facebook user, the video appears amateur and, above all, trivial.

Avakov, however, suggested otherwise. Attempting to anchor the video's meaning, the post featured an extended set of captions that began by identifying the truck as a “caterpillar missile system [...] moving in the direction through Krasnodon, toward the Russian Federation.” Upon a closer look, the Facebook post stated, one could see that “two missiles are in place; the middle one isn't visible.” These bits of information were described as “irrefutable factors and evidence pointing to the authors of this tragedy as the terrorist organization of DPR/LPR and its Russian sponsors” (Avakov, 2014). The clip proved, according to Avakov's post, that the separatists had borrowed a BUK system from Moscow, fired it once, downing MH17, and then returned the murder weapon back to Russia.

Avakov's Facebook post hinted that further analysis would be forthcoming. Yet, without more evidence, the video and its caption proved absolutely nothing. Yes, Avakov's story represented a plausible interpretation of the video. It did nothing, however, to exclude alternative possibilities. Maybe the truck in the video was not carrying BUKs at all. Maybe it was travelling within west Ukraine, moving between government bases. Maybe the video was a complete fabrication. Decidedly

unpersuasive to a neutral observer, the post appears at first blush to be a naïve, almost absurd attempt at convincing the world of Ukrainian innocence and separatist guilt.

There was, however, a more complex dynamic at play. Avakov's video post was not intended, on its own, to prove the veracity of the Ukrainian version of MH17's demise. Statements of important, proven facts are not generally made on Facebook pages, absent English translations and without attendant corroborating information. Instead, Avakov's communiqué is better understood as a job posting or, perhaps more accurately, a call for volunteers. The murky BUK video was an intriguing puzzle, irresistible to the skilled, forensic online video investigators described by Sienkiewicz (2014) as the global "interpreter tier" that plays a key mediating role between citizen video makers and mainstream press outlets.

It is possible, even likely, that the Ukrainian government already knew about the video's origins and authenticity. The videographer was probably a Ukrainian operative who would have noted precisely the time and location at which the clip was recorded. The Ukrainians thus were not looking for run of the mill intelligence assistance when they posted the video to Facebook. Instead, what they needed was outside observers who could testify to Kiev's interpretation of the video and, crucially, make public their methods of verification without compromising Ukrainian security strategies and personnel. Avakov's post was thus not asking the world to trust the video; it was calling upon supportive experts to make the video trustworthy.

This paper argues that the case of the BUK video reveals a thus far unexamined use of social media and digital labor—one that slides between the cracks of scholarship in this emerging sub-field of media studies. Academic discourse on online labor is largely dominated by a vibrant, productive debate on the corporate profit that results from the uncompensated efforts of fans and social media users. Another, somewhat less common path of inquiry, engages with the use of amateur and crowd-sourced labor in the process of crime prevention, detection and prosecution. As I argue throughout this paper, these debates offer important insights into the dynamics of the digital labor involved in verifying and geolocating the BUK video.

However, whereas the bulk of scholarship on digital labor focuses on questions of compensation and exploitation, I argue that a different dynamic is at play in this instance. Yes, the Ukrainian government received the fruits of work it did not pay for when volunteers and third party organizations across the world set to investigating Avakov's Facebook post and video. Nonetheless, to view this engagement through a primarily fiscal lens is to miss its greater political significance. More than simply saving money, the Ukrainian government used outside digital labor in order to combat Russia's deep-pocketed, vastly resourced international public relations efforts. Unable to match Russia in terms of broadcasting reach or the use of its vast, expensive internet "troll army," Ukraine enlisted volunteers in order to accrue a strategic discursive dividend, as opposed to a financial benefit. In some cases, this dividend was earned through the work of individuals already devoted to the pro-Ukrainian/anti-Russian cause but who labored outside of any official Ukrainian

workspace. In others, individuals took on the project of investigating the BUK video as a form of what Kuenn and Corrigan (2013) describe as “hope labor,” intended to establish professional bona fides and future employment.

To frame this case, I begin by reviewing scholarship on digital labor, noting that studies of commercial uses of unpaid labor offer useful tools in conceptualizing the motivations of some individuals who worked for free on the BUK video. I then discuss a movement toward citizen surveillance that pre-dates the Ukrainian conflict, focusing largely on the post-9/11 moment. This done, I turn to the BUK video and its contexts. I begin with a brief discussion of Russia’s contemporary information apparatus, detailing the considerable resources the nation has at its disposal in order to deny the culpability of pro-Russian separatists for the downing of MH17. I then look to two of the many organizations that contributed to the public, open-source geolocation and verification of the clip: *The Interpreter* and *Bellingcat*. In doing so, I catalog the intensive and often rather tedious labor that was performed in this collective effort. In conclusion, I note the convergence of factors that made it possible for the Ukrainian government to draw upon unpaid and externally paid digital labor in order to secure a significant strategic discursive dividend.

Will Work For Fun

The Ukrainian government’s utilization of unpaid and externally compensated digital labor is made possible by a confluence of economic, discursive, and technological factors. Chief among these is a growing acceptance of “free labor” both on and offline. As Christian Fuchs (2010) argues in the context of “informational capitalism,” all profitable, or even self-sustaining, organizations require unpaid labor (p. 183). Althusser (1971) conceptualizes this work as the “reproduction of the conditions of production,” meaning all of those activities that take place outside of paid work hours, both physical and ideological, that allow for the long-term continuation of productive enterprise. Regardless of the era, capitalistic systems require work to be done beyond the realm of waged and accounted-for labor.

However, in its earliest iterations the internet prompted many intellectuals to identify it as a potential counterexample to this tendency towards exploitation—a place in which effort would be fairly acknowledged and rewarded. Early pioneers such as Timothy Berners-Lee and Ted Nelson, for example, refused to file patents or take ownership of their world-changing innovations, choosing not to take part in creating the rentier class of digital capitalism. In one of the earliest assessments of the revolutionary possibilities of online digital labor, Howard Rheingold (1993) describes the all-volunteer community known as the Whole Earth Lctronic Link (WELL). In Rheingold’s account, the WELL provides an inspiring space of “group problem-solving” in which there is no apparent exploitation (p. 109). Without budgetary motivations, the WELL offered an environment in which digital labor was both transparent and, seemingly, equitable.

Quickly, however, this utopian vision gave way to the realities of capitalism and state hegemony. As Mia Consalvo (2003) argues, corporations were granted

increasingly comprehensive legal rights to the internet, including the ability to control certain core elements of internet coding. Whereas university researchers and volunteer communities such as the WELL dominated the early internet, by 2010 corporations controlled an overwhelming proportion of web usage. As Fuchs (2011) argues, over the course of a few decades the internet transformed from a space of participatory ownership to a venue in which individuals were merely invited to play prescribed roles in economic strategies crafted by the transnational business-elite (p. 212).

In a famous example of this development, *The Huffington Post* took an approach to labor that has come to represent a key aspect of the internet culture in which the BUK video analysis was to take place years later. A widely read virtual newspaper, *The Huffington Post* offered only tokenistic compensation in exchange for well-written pieces of journalism, analysis, and opinion. So long as Arianna Huffington privately owned *The Post*, the exploitation inherent in this dynamic was obscured by the vagaries of web-business valuation. However, in 2011 the site was sold to America Online, with Huffington receiving \$315 million dollars. Immediately, writers organized a boycott and lawsuit claiming that Huffington had earned this money by breaking labor laws. As Andrew Ross (2013) argues in his account of the case, defenders of Huffington pointed to the expansion of the contemporary “attention economy,” in which digital work, including writing, is compensated not through spendable currency, but instead with far less tangible forms of social and cultural capital (p. 15). In a systematic study of unpaid online workers, Kuehn and Corrigan (2013) offer the concept of “hope labor,” arguing that such workers are making a rational choice to invest today’s time in the hope of gaining enjoyable, profitable work in future. This “hope labor” perspective is particularly applicable to the case of *Bellingcat*’s Aric Toler, whose devotion to the MH17 BUK question was driven in large part by a desire to move into the world of funded forensic journalism.

Big Brothers, Friends, and Neighbors

The study of digital labor, as noted above, has been dominated by debates weighing corporate value extraction against absent or non-traditional forms of worker compensation. The subtitle of Trabor Scholz’ (2012) important volume *Digital labor: The internet as playground and factory* alludes to this mode of thinking. However, drawing upon Mitchell Dean’s work on Foucault’s notion of “governmentality” (2010), Mark Andrejevic (2006) argues that the post-9/11 period has also featured an unprecedented surge in governmental interest in recruiting uncompensated labor. By promoting terrorism “readiness campaigns” and thus offloading “duties of ‘homeland security’ on to [its] citizenry,” the US has not only succeeded in employing thousands of unpaid unintelligence officers; it has also interpellated countless individuals into a system that justifies the curtailment of traditional American rights to privacy and, in extreme cases, due process (p. 442). The internet, Andrejevic argues, has provided a particularly powerful medium through which to recruit economic and ideological volunteers to the side of the government as “the participatory model of information

consumption associated” with online activity has blended seamlessly with calls for surveillance among and between American citizens (p. 440). This trend has only been bolstered by the vast, global expansion of video surveillance in public spaces over the past decades (Yesil, 2006, p. 405). The ubiquity of such video and the acceptance of civilian analysis thereof represent an important precondition for the case of MH17 and the BUK video.

In what Daniel Trottier (2014) describes as a unique “business model,” the British government reduced police costs and reaffirmed the preeminence of the law by employing citizen volunteers to watch video feeds of potential shoplifters (p. 623). Similarly, the state of Texas employed volunteers to monitor border crossings, drawing upon citizens to “offload the responsibility, cost and labor of security and surveillance onto the private sector” (Tewksbury, 2012, p. 250). Perhaps most dramatically, the Boston Police Department invited internet users to play an active role in the manhunt and investigation surrounding the bombing of the 2013 Boston Marathon. As Tapia, LaLone, and Kim (2014) argue, this process, which included crowdsourced video input as well as amateur analyses, produced decidedly mixed results. Most disturbingly, the website Reddit featured a popular thread misidentifying the bombers entirely. Nevertheless, the effort evidenced the “significant degree of communicative and investigative power” the government was willing to grant to unpaid digital laborers (2014).

Ukraine’s approach to the BUK video incorporated elements from all of the above cases. However, whereas analyses of these previous instances have focused on the economic and domestic benefits conferred by online volunteerism, Ukraine’s strategy was aimed at a more strategic and global objective. Beyond simply using amateur surveillance and analysis to reaffirm citizen commitment to the ideology of the state, Ukraine employed the internet as a tool of international relations. Absent a global communication infrastructure comparable to that of Russia, Ukraine drew upon online laborers to help make up what amounted to a considerable discursive deficit on the world stage.

Goliath and His Trolls: The BUK Video and Russia’s Media Outreach

As Kahn and Kellner (2004) argue, there is much to recommend the internet as an emancipatory force capable of disrupting government communication monopolies and discouraging the spread of misinformation aimed to quell dissent. Citing the Zapatistas and the Anti-Globalization movement as two examples, they offer strong evidence that technology can aid in the pursuit of enlightened forms of populism even in the face of considerable governmental resistance. At the same time, however, numerous international case studies have shown that the internet is by no means essentially endowed with liberalizing characteristics. In a study geographically and politically close to the media environment of Russia and Ukraine, Katy Pearce (2015) offers a close analysis of Azerbaijani uses of social media to discourage and discredit oppositional perspectives online. Invoking the concept of *kompromat* (compromising materials), Pearce details the ways in which the Azerbaijani regime torments its

internet enemies through a combination of blackmail and bullying. When faced with a lack of compelling compromising material about an opponent, it invents it, often creating ostensibly humorous online “memes” in order to foster a spreadable form of digital embarrassment (p. 8).

Russia employs similar tactics, on a much larger scale, with regards to its conflict with Ukraine. As reported by the *Guardian*, Russia employs a “troll army” featuring “hundreds of paid bloggers [who] work round the clock to flood internet forums, social networks and the comments sections of western publications” with praise for the Russian regime and attacks on its enemies (Walker, 2015). Alongside countless ersatz blogs on the Russian-owned website *Live Journal*, these workers are also armed with a library of “pastable” images of American and Ukrainian leaders with which to create the very sorts of attacking memes described by Pearce (2015). Receiving nearly \$800/month, members of the Russia misinformation corps wait at the ready for news stories the regime wishes to counter with swift, overwhelming discursive force.

Avakov’s July 18 Facebook posting of the 13-second BUK video brought exactly such a response. Within a day of the video’s release, the Russian social media site *Vkontakte*, as well as *Twitter*, *Facebook*, and *Live Journal*, were inundated with thousands of nearly identical postings from countless different accounts. Each of these theorized the BUK video was shot near Kiev and thus could be used to cast blame on the Ukrainian Army for the downing of MH17. News stories from across the web were similarly flooded with comments offering a Russian interpretation of the clip that exonerated pro-Russian rebels in Donetsk and Lughansk.

The messages suggested a specific location for the BUK video, basing this claim on the identification of the billboard that appears in its background. Identifying the sign as an advertisement for the Bogdan Auto Group, the posts argued that the billboard featured an address for a dealership. Additionally, the post argued that the video revealed a StroiDom building supply store in the deep background. Combining this information, the posts said the video must have been taken at 49 Gorky Street in the city of Krasnoarmeysk, well beyond the control of the separatists. An indicative example proclaimed:

the shooting Buk was located on a territory under the control of the [Ukrainian government] junta and is still there. What questions are there? Everything is as clear as day—the Boeing was shot down by Ukrainian military by this very Buk, and now, in order for the video which leaked on to the web not to become compromising material, they decided to stupidly lay the blame on the militia. (Fitzpatrick, personal communication, December 29, 2014)

On July 21, the Russian Defense Ministry invoked a second, powerful prong in Russia’s communication strategy. Broadcasting on the global, multi-language satellite outlet *RT* (formerly *Russia Today*), Russian representatives released an official statement on the downing of MH17, reaffirming the Gorky Street address and offering an explanation nearly identical to that of the online postings that appear to have emerged from the troll army. Reaching Europe, Asia, and the Americas and featuring a self-proclaimed operations budget of \$225 million, *RT* offers slick

production values and has employed high-profile personalities including Larry King and Julian Assange (For Propaganda & “democracy promotion,” 2015). It has also been described by the US Department of State as a “distortion machine” that routinely produces outright fabrications in its efforts to discredit Ukrainian leadership (Stengel, 2014). *RT*’s presentation and analysis of the BUK video was thus professional in appearance and highly beneficial to the interests of pro-Russian separatists in Donetsk and Lugansk. It was also, however, of highly questionable truth-value.

When Avakov posted the BUK video to Facebook, he surely anticipated Russia’s response and understood that Ukraine possessed no equivalent for either *RT* or the Kremlin’s professional troll army. However, aided by a dispersed and highly skilled group of volunteers, Ukraine was able to bolster its own discursive reach and mount its own credible, externally vetted version of the downing of MH17. In the following section I consider two of the main institutions that worked on Ukraine’s behalf: *The Interpreter* and *Bellingcat*.

The Interpreter

Russia’s version of the story, while setting the terms of the debate over the BUK video, also served to motivate and perhaps even enhance forensic investigation into the video by outside sources. As James Miller, managing editor of the Russian-opposition website *The Interpreter* notes, Russia’s theory offered a place to start analyzing the video when none was otherwise apparent (personal communication, December 29, 2014). The Russian theory thus gave direction to *The Interpreter*’s staff, as well as to countless others interested in playing a part in solving the mystery. Catherine Fitzpatrick, a researcher at *The Interpreter* and a self-avowed enemy of the Putin regime, used the Russian-provided explanation to create a checklist of key elements to consider in analyzing the BUK clip. Most importantly, by specifically citing 49 Gorky Street, the Russians gave Fitzpatrick a way to employ powerful free tools for geolocating imagery.

Drawing upon social media uploads, Yandex, Google Earth, and Google Street imagery, Fitzpatrick was able to show that the 49 Gorky Street address did not appear to offer any vantage point matching that of the BUK video. Then, looking closely at the billboard, she identified what she believed to be, at best, a Russian misinterpretation (Fitzpatrick, personal communication, December 29, 2014). The Russians had claimed that the mostly obscured Bogdan Auto sign featured a Gorky Street address. In the version of the video uploaded originally by Avakov, however, this was simply not the case—no address of any sort was apparent. Furthermore, Fitzpatrick discovered a Bogdan dealership in Lugansk, suggesting that the billboard very plausibly could be located in rebel-held territory.

The most important, most labor-inducing detail, however, was even subtler. The video, upon very close inspection, reveals electric trolley lines suspended above the road on which the BUK-carrier travels. Aric Toler, an independent journalist with no prior professional experience, posted to Twitter a simple but crucial observation:

Krasnoarmayesk, the Russian-identified location of the video, has no trolley service on Gorky Street or anywhere else. Russia's explanation for the video, though at first look plausible enough to fuel thousands of online posts by the troll army, did not appear to fit the facts of the case.

Casting doubt on 49 Gorky St, of course, was far from sufficient to show that the BUK was, in fact, fired from rebel-held territory. To move towards a positive identification, a painstaking process of elimination was necessary. *The Interpreter*, despite being unaffiliated with the Ukrainian government, was willing to put in such an effort. Although officially a New York-based non-profit, *The Interpreter's* parent organization, the Institute of Modern Russia (IMR), is deeply affiliated with a major internal Russian opposition movement. Pavel Khodorkovsky, son of the long imprisoned Mikhail Khodorkovsky, serves as the IMR's president. Officially devoted to "Russia's integration into the community of democracies" (About Us, 2014), the organization openly opposes the ruling government of Vladimir Putin. The IMR thus had ample motivation to support an effort aimed at proving the MH17 attack to have emerged from the pro-Russian rebel stronghold of Lugansk.

Starting on July 18, three paid Interpreter employees, Fitzpatrick, Miller, and Pierre Vaux, searched every inch of Ukrainian highway via online tools in order to identify the scene that appears in the video. Complicating their work was the original posting on Avakov's Facebook page, which claimed the video was taken as the truck moved "through Krasnodon." Using satellite imagery from Google and Yandex, they determined that no intersection in Krasnodon met the major signifiers found on the video: trolley lines, specific road intersection angles, trees, the Bogdan billboard, and so on. Reinterpreting Avakov's statement, they then began checking every plausible route in eastern Ukraine that would, at its end, lead one "through Krasnodon" and into Russia. This process involved zooming into every candidate intersection in the country that featured trees. Finding a possible location, they would then zoom in as far as possible from above and, wherever possible, hunt for street view imagery and YouTube videos that gave ground-level perspectives on the intersection in question. Hundreds of sites required investigation. Some could be dismissed in moments. Others took hours to eliminate.

Having narrowed the field, Fitzpatrick spent a full day calling Russian billboard companies, attempting to locate a Bogdan advertisement in an intersection that seemed to otherwise match up perfectly. Although never able to confirm the placement of the billboard, *The Interpreter* did succeed in determining that there was, at the time of MH17's explosion, an undisclosed billboard at a site that matched entirely with the imagery featured in the BUK video. Bogdan, not wishing to involve itself in the controversy, gave no comment.

Bellingcat

If there is a celebrity among the "interpreter tier" of contemporary journalism, it is Elliot Higgins. Formerly known by the avatar Brown Moses, Higgins garners attention seldom enjoyed by journalists of any sort, let alone those who rarely leave

their homes. *The New Yorker*, in a profile entitled “Rocket man,” describes him as “an indispensable analyst” of the Syrian Civil War (Keefe, 2013). *The Huffington Post* goes quite a bit further, identifying him as “the one-man intelligence unit that exposed the secrets and atrocities of Syria’s War” (Bosker, 2013). Numerous scholarly analyses of the Syrian Civil War (Miller & Sienkiewicz, 2012; Wall & el Zahad, 2014; Sienkiewicz, 2014; Gohdes, 2014) have complicated this perspective, highlighting the profoundly collaborative nature of the work that Higgins and his peers have engaged in while covering the conflict. Yet, Higgins’ stardom played a crucial role in organizing and attracting digital laborers to the case of MH17.

At the time of the downing of MH17 and the release of the BUK video, Higgins was still focused on Syria, continuing a multiyear investigation of the use of sarin gas by the Assad regime. In order to expand his reach, Higgins began an online startup for open source news entitled *Bellingcat*. Funded largely by reader contributions of less than \$100, the site served two major functions. First, the donations paid for his modest living expenses as he continued his work on Syria. Second, the site acted as a tool to recruit new talent and serve as a conduit between social media interpreters and mainstream news sources.

In the early stages of the MH17 investigation, *Bellingcat* proved amply capable of achieving this second objective. Aric Toler, who had first pointed out the BUK video’s telltale trolley lines, used an entirely different set of data to piece together another crucial piece of information. Even before the downing of MH17, a picture of a BUK-carrying military truck sitting in a Ukrainian parking lot was circulating in various social media. After Avakov released the 13-second BUK video on Facebook, it became apparent that the parking lot photo was a document of the same vehicle featured in the BUK clip, taken at some earlier point in time. A theory emerged that the parking lot was in Torez, a rebel-held city in which local businesses were known to support anti-Ukrainian separatists (Fitzpatrick, personal communication, December 29, 2014). The sparseness of the image, however, left few clues with which to prove the photo was, in fact, of Torez.

Through painstaking effort, Toler made his breakthrough. Searching through every image he could find of Torez, he eventually found a dashboard camera video that, ever so briefly, passes by a building with an odd, diagonally striped sign while driving through the city. Returning to the original parking lot image, he found a match. With this information in hand, he was then able to use satellite imagery to positively identify the location and give a solid accounting of when the parking lot image might have been taken. Though just one piece of the puzzle, this analysis added considerable credence to the notion the BUK missile in question was in rebel hands before the tragic day of July 17.

On his own, however, Toler’s labor had little value. Dozens of individuals were posting similarly bold theories and, while Toler’s was the result of superior research, his unknown status was a major hindrance to his work’s acceptance. So, instead of writing an article or contacting a traditional news outlet, Toler tweeted to Elliot Higgins. Higgins reviewed Toler’s efforts, tweeted his approval to his 29,000 followers and invited Toler to join his staff at *Bellingcat*. He offered nothing in the way of

financial compensation and yet Toler enthusiastically accepted the offer. The downing of MH17 became the next major project of Higgins and *Bellingcat*.

On July 22, multiple sources corroborated the location of the BUK video that was identified by *The Interpreter* (Higgins, personal communication, December 2014). Numerous mainstream news organizations visited the sites identified by Toler, Fitzpatrick, and others, finding ample on-the-ground evidence to support the theorized location. The official Euromaidan Twitter account, as well as the Ukrainian ministry of information, posted specific coordinates, creating a consensus among non-Russian investigations. It is impossible to know the extent to which these official determinations were based upon the work of Fitzpatrick, Miller, Vaux, Toler, Higgins, or the numerous other groups and individuals who worked on the video. Very likely, the information itself was not new to Ukrainian sources. The extensive labor put in by these digital investigators, however, lent important credibility to the final Ukrainian assessment, putting it in stark opposition to Russia's widely disseminated but entirely opaque approach to the story. Ukraine's free digital man-and woman-hours thus provided considerable value, regardless of whether the information was truly revelatory to the government.

Furthermore, the video geolocation served as the centerpiece for *Bellingcat's* remarkably detailed, long-term investigation of the entire MH17 incident. Working on the story for months, Higgins, Toler, and a team of six additional volunteers have convincingly mapped the entire route of the BUK truck from the parking lot in Torez to its point of fire to its return trip across the Russian border. To do so they have drawn upon a wide variety of tools. Using state of the art software, they have measured images of craters in order to determine directions of impact. Working with local journalists and foreign correspondents, they have recorded nearly every possible angle of the roads in question, creating compelling annotated diagrams that spell out exactly when and from where key pieces of video evidence were recorded. In total, their work has had an impressive impact, with the Dutch government, which lost many citizens in the MH17 tragedy, drawing upon *Bellingcat's* work in its official criminal investigation. Other than Higgins, however, no one has been paid for this effort (Higgins, personal communication, 2014).

Conclusion: Online Culture and Discursive Dividends

Diverse aspects of online culture, economics, and politics motivated the pool of digital laborers that Ukraine animated by posting the mysterious BUK video. For one, as countless amateur video analysts seized on the initial release, it is impossible to ignore the parallels with corporate strategies of crafting what Jason Mittell (2009) describes as "forensic fandom." Despite the significantly different moral and political ramifications, there is ample overlap between the BUK video phenomenon and the "hyper-attentive mode of spectatorship" that, for example, the ABC program *Lost* created through the release of short, strategically ambiguous images and videos (p. 120). Although it is reductive to equate fan analysis of *Lost's* fictional plane crash with the real, tragic demise of MH17, the widespread online hobby of parsing digital

data for hidden meaning is a fundamental aspect of both activities. This overlap points to potentially powerful ways in which the pleasures of “participatory culture” (Jenkins, 2006) can be mobilized by government interests in the pursuit of financial and, perhaps more importantly, ideological advantages.

Another enabling factor resulted from the recent but nonetheless pervasive consensus that a young, creative laborer must begin her career by volunteering time and labor to established institutions. As Kuehn and Corrigan (2013) argue, this phenomenon is particularly engrained in the economic assumptions of internet culture, where there exists “an ideological process that legitimizes [...] power asymmetries” that encourage young individuals to offer free work. In exchange, these uncompensated laborers receive the chance, but by no means the promise, of employment within an attractive, creative field. This “hope labor” is not performed out of pure economic ignorance, of course, as individuals are aware of their sacrifice. However, it is produced within a system that encourages artists, writers, and journalists not to question the fundamental justice of providing free value to wealthy and powerful institutions (p. 20). Aric Toler’s efforts described above must be understood within the context of this logic. Most likely, Toler’s commitment to sorting out the BUK video was overdetermined, with political and journalistic ideals no doubt driving some of his decisions. At the same time, Toler’s hours of devotion resonate strongly with the actions of a hope laborer. Most strikingly, his enthusiastic decision to freely provide his work to *Bellingcat* exhibits his willingness to forsake present-day compensation in the optimistic expectation of establishing an Elliot Higgins-like public profile that can underpin a professional or semi-professional career in forensic journalism. Although Ukraine’s approach to courting external labor was far subtler than most corporate appeals for volunteer online work, it nonetheless benefitted from an established understanding of non-compensation for young journalists and writers online.

A final element that made possible Ukraine’s use of external digital labor emerges from the intersection of transnational advocacy and the globalizing nature of politics online. In the case of *The Interpreter’s* contribution, Ukraine benefitted from the increasing popularity of what Keck and Sikkink (1999) describe as the “boomerang” approach to fostering domestic change. The BUK video, combined with Russia’s willingness to publicly offer a questionable, self-serving interpretation thereof, created an opportunity for the opposition-funded Institute of Modern Russia to advance its own agenda. Unable to penetrate important local discursive channels due to government restrictions, the IMR attempted to incur domestic change by impacting the international sphere and hoping these ideas filter back to Russia via the internet. In the case of MH17 and the BUK video, the ambitions of Ukraine and the Russian opposition aligned perfectly. To disprove Russia’s interpretation of the video was to both refute claims of Ukrainian guilt and to damage the international reputation of the Putin regime. As a result, the IMR happily offered a pool of resources that played a significant role in counteracting mainstream Russian discursive dominance.

There is, of course, nothing inherently new about recruiting civilian labor in order to bolster a nation’s material and ideological position in the midst of a crisis. As

Moghaddam and Breckinridge (2011) argue, traumatic events tend to produce surpluses of “civic generosity” among a citizenry that, if properly mobilized, can result in tremendous sacrifices of labor and capital. In the US during World War II, for example, thousands of individuals took it upon themselves to collect metal, staff community service events, and join civil emergency preparedness organizations without asking for recompense. Although the labor of such people was, in a technical sense, being exploited, to apply such a lens would be to misidentify the full nature of their enterprise. Far from being subject to the sort of false consciousness that Marxists ascribe to under-compensated workers within capitalism, these individuals made informed, conscious decisions to forgo short term personal gain in order to promote a preferable long-term state of world affairs.

Ukraine’s subtle but effective recruitment of online laborers in the analysis of the BUK video is best understood similarly, as the ideological affinities of volunteers converged with their long-term personal interests in order to motivate civic engagement. However, the BUK video offers some unique elements unseen in traditional volunteer movements. Strikingly, the labor corps stirred to action by the video transcended the traditional categories by which groups tend to be motivated to such unpaid actions. Although certainly many people involved with the video’s analysis were Ukrainian, a large number, including Toler, had no pre-existing connection to the country. For such a movement to emerge outside of traditional ethnic, political, or national identification groups is both remarkable and a testament to the potentially revolutionary power of the tools of online digital labor. The case of the BUK video thus offers a chance to understand the means by which the nationalistic forms of government-fostered labor described by Andrejevic (2006) and Trottier (2014) can spread beyond borders via the internationalizing elements of online culture.

Furthermore, the BUK video exemplifies the relatively concrete, strategic value of discourses that can be fostered through citizen labor efforts. Unlike, for example, post-9/11 government calls for citizen surveillance, the efforts of Toler and Fitzpatrick were not aimed at mere possible or potential threats. As opposed to being framed broadly and geared towards producing certain ideologies of citizenship, the discursive output of labor related to the BUK video was aimed at contributing toward an acute political and military need of the Ukrainian government. As Lada Roslycky (2011) argues, specific, cross-border discursive interventions have played a crucial role in the recent conflict between Ukraine and Russia. Analyzing the situation in Crimea that led to Russia’s unilateral annexation of the region, Roslycky shows the concrete impact of Moscow’s “soft power” and misinformation campaigns. Unable to effectively counter the Russian narratives of Crimean history and politics, Ukraine failed to maintain the support of the population. In the end, it lost Crimea, depriving the country of a crucial military and economic region and dealing a significant blow to notions of Ukrainian sovereignty.

The work of Toler, Fitzpatrick, and others was thus a defense against a Russian version of the MH17 narrative meant to encourage Ukrainian separatism and discourage Western support for Kiev. It is impossible to quantify the impact of the

effort. However, the frequency with which international sources came to quote *Bellingcat* and *The Interpreter* in MH17 reporting suggests that Ukraine accrued a valuable strategic discursive dividend from online laborers. This use of free labor was not precisely parallel to exploitative tactics employed by corporations in online contexts. It was, however, enabled in part by an Internet culture in which “forensic” approaches to video consumption, the promises of “hope labor” and cross border advocacy movements are deeply engrained. In the end, these factors strengthened the Ukrainian position, providing the state with a discursive dividend that served to counteract Russia’s vast media and public relations resources.

References

- About us. (2014, December 20). Retrieved from <http://imrussia.org/en/about-us>
- AFP. (2014, December 24). Russia says Ukrainian pilot behind MH17 crash. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/news/worldnews/europe/ukraine/11312348/Russia-says-Ukrainian-pilot-behind-MH17-crash.html>
- Althusser, L. (1971). *Ideology and ideological state apparatuses (notes towards an investigation)*. In B. Brewster (Trans.), *Lenin and philosophy and other essays* (pp. 127–186). New York, NY: Monthly Review Press.
- Andrejevic, M. (2006, August 20). Interactive (in) security: The participatory promise of ready.gov. *Cultural Studies*, 20(4–5) 441–458. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/09502380600708838?journalCode=rcus20#.VKjK_Vb4vwj
- Andrejevic, M. (2013). Estranged free labor. In T. Scholz (Ed.), *Digital labor: The internet as playground and factory* (pp. 149–164). New York, NY: Routledge.
- Avakov, A. (2014, July 18). In *Facebook* [Personal Profile]. Retrieved from <https://www.facebook.com/arsen.avakov.1/posts/670837696339673>
- Birnbaum, M. (2014, July 11). Ukraine president vows revenge after 19 soldiers killed in rebel rocket attack. *Washington Post*. Retrieved from http://www.washingtonpost.com/world/ukraine-president-vows-revenge-after-19-soldiers-killed-in-rebel-rocket-attack/2014/07/11/28dde6c2-093e-11e4-a0dd-f2b22a257353_story.html
- Bosker, B. (2013, November 18). Inside the one-man intelligence unit that exposed the secrets and atrocities of Syria’s war. *HuffPost Tech*. Retrieved from http://www.huffingtonpost.com/2013/11/18/eliot-higgins-syria_n_4269417.html
- Consalvo, M. (2003, January). Cyber-slaying media fans: Code, digital poaching, and corporate control of the internet. *Journal of Communication Inquiry*, 27(1), 67–86. Retrieved from <http://jci.sagepub.com/content/27/1/67.short>
- Davidson, H., & Yuhas, A. (2014, July 18). Malaysia Airlines plane MH17 ‘shot down’ in Ukraine—as it happened. [Blog] *The Guardian*. Retrieved from <http://www.theguardian.com/world/2014/jul/17/malaysia-airlines-plane-crashes-ukraine-live>
- Dean, M. (2010). *Governmentality: Power and rule in modern society*. London: Sage.
- Finley, J.C. (2014, July 17). Malaysia Airlines crash prompts Ukrainian President Poroshenko to investigate. *United Press International*. Retrieved from http://www.upi.com/Top_News/World-News/2014/07/17/Malaysia-Airlines-crash-prompts-Ukrainian-President-Poroshenko-to-investigate/3711405614458/#ixzz3NQ4e65B2
- Fitzpatrick, C. (2014, July 21). Russia this week: Kurginya brags about sending repairmen for buks (14–19 July). Retrieved from <http://www.interpretermag.com/russia-this-week-lurid-anti-ukraine-propaganda-broadcast-on-state-tv/#1753>
- For propaganda & ‘democracy promotion’: State Dept seeks budget to counter RT. (2015, 26 February). Retrieved from <http://rt.com/usa/235579-kerry-budget-rt-hearing/>

- Fuchs, C. (2010). Labor in informational capitalism and on the internet. *The Information Society*, 26, 179–196.
- Fuchs, C. (2011). Web 2.0, Prosumption, and surveillance. *Surveillance & Society*, 8(3), 288–309.
- Gohdes, A.R. (2014, August 6). Pulling the plug: Network disruptions and violence in civil conflict. *Journal of Peace Research*. Retrieved from http://www.anitagohdes.net/uploads/2/7/2/3/27235401/gohdes_synnetworkaug14.pdf
- Jenkins, H. (2006). *Fans, bloggers, and gamers: Exploring participatory culture*. New York, NY: NYU Press.
- Kahn, R., & Kellner, D. (2004). New media and internet activism: From the ‘Battle of Seattle’ to blogging. *New Media & Society*, 6(1), 87–95.
- Keck, M.E., & Sikkink, K. (1999, March). Transnational advocacy networks in international and regional politics. *International Social Science Journal*, 51(159), 89–101.
- Keefe, P.R. (2013, November 25). Rocket man: How an unemployed blogger confirmed that Syria had used chemical weapons. *The New Yorker*. Retrieved from <http://www.newyorker.com/magazine/2013/11/25/rocket-man-2>
- Kuehn, K., & Corrigan, T.F. (2013). “Hope labor: The role of employment prospects in online social production.” *The Political Economy of Communication*, 1(1): 9–25.
- Mendick, R. (2014, July 27). MH17: Why the culprits may never be caught. *The Telegraph*. Retrieved December 29, 2014, from <http://www.telegraph.co.uk/news/worldnews/europe/ukraine/10993020/MH17-why-the-culprits-may-never-be-caught.html>
- Miller, J., & Sienkiewicz, M. (2012, August 16). Straight news from the citizens of Syria. *Columbia Journalism Review*. Retrieved from http://www.cjr.org/behind_the_news/straight_news_from_the_citizen.php?page=all
- Mittell, J. (2009). Lost in a great story: Evaluation in narrative television and television studies. In R. Pearson (Ed.), *Reading LOST: Perspectives on a hit television show*, (pp. 119–138). London: Tauris.
- Moghaddam, F.M., & Breckenridge, J.N. (2011). Post-tragedy “opportunity-bubble” and the prospect of citizen engagement. Calhoun: Institutional Archive of the Naval Post Graduate School.
- Pearce, K.E. (2015, 27 March). Democratizing Kompromat: The affordances of social media for state-sponsored harassment. *Information Communication & Society*. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/1369118X.2015.1021705>
- Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. New York, NY: Perseus Books.
- Roslycky, L.L. (2011). Russia’s smart power in Crimea: Sowing the seeds of trust. *Southeast European and Black Sea Studies*, 11(3), 299–316.
- Ross, A. (2013). In search of a lost paycheck. In T. Scholz (Ed.), *Digital labor: The internet as playground and factory* (pp. 13–32). New York, NY: Routledge.
- Scholz, T. (Ed.). (2012). *Digital labor: The internet as playground and factory*. New York, NY: Routledge.
- Sienkiewicz, M. (2014, June 9). Start making sense: A three-tier approach to citizen journalism. *Media, Culture, & Society*, 36, 691–701.
- Stengel, R. (2014, 29 April). “Russia today’s disinformation campaign.” *Dipnote: US Department of State Official Blog*. Retrieved from <http://blogs.state.gov/stories/2014/04/29/russia-today-s-disinformation-campaign>
- Tapia, A.H., LaLone, N., & Kim, H.W. (2014, May). Run amok: Group crowd participation in identifying the bomb and bomber from the Boston Marathon bombing. In S.R. Hiltz, M.S. Pfaff, L. Plotnick, & P.C. Shih (Eds.), *Proceedings from the 11th International ISCRAM Conference* (pp. 265–274). University Park, PA: Pennsylvania State University.
- Tewksbury, D. (2012). Crowdsourcing homeland security: The Texas virtual borderwatch and participatory citizenship. *Surveillance & Society*, 10(3/4), 249–262.

- Toler, A. (2014). @AricToler. Retrieved from <https://twitter.com/AricToler/status/490205392417206272>
- Trottier, D. (2014). Crowdsourcing CCTV surveillance on the internet. *Information, Communication & Society*, 17(5), 609–626.
- Walker, S. (2015, April 2). Salutin' Putin: Inside a Russian troll house. *The Guardian*. Retrieved April 10, 2015, from <http://www.theguardian.com/world/2015/apr/02/putin-kremlin-inside-russian-troll-house>
- Wall, M., & Zahed, S.E. (2014, July 25). Syrian citizen journalism: A pop-up news ecology in an authoritarian space. *Digital Journalism*. Retrieved from <http://www.tandfonline.com/doi/ref/10.1080/21670811.2014.931722#tabModule>
- Yesil, B. (2006). Watching ourselves: Video surveillance, urban space and self-responsibilization. *Cultural Studies*, 20(4–5), 400–416.