



UvA-DARE (Digital Academic Repository)

Brains with character: Reading and writing neuronarrative

Yaczo, T.F.

Publication date

2015

Document Version

Final published version

[Link to publication](#)

Citation for published version (APA):

Yaczo, T. F. (2015). *Brains with character: Reading and writing neuronarrative*. [Thesis, fully internal, Universiteit van Amsterdam].

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

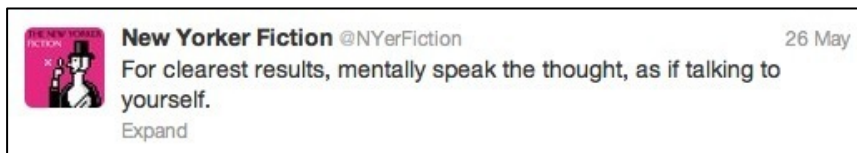
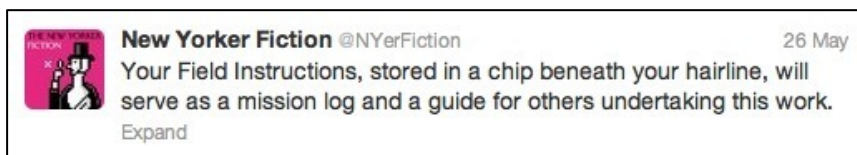
Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, P.O. Box 19185, 1000 GD Amsterdam, The Netherlands. You will be contacted as soon as possible.

Chapter Five

Your Brain In 140 Characters

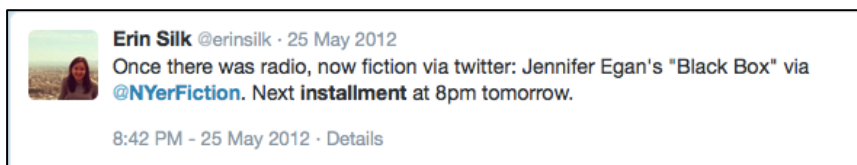
That first night I overhear her manipulating the violent and ruthless man, seducing him out of an abiding love for her country and allowing him to have his way with her on a chalky yellow rock beach next to the Mediterranean. These self-conscious details trickle to me over the course of an hour, one each minute. The second evening, as she returns with the other concubines to the violent and ruthless man's villa, she tells me about the microphone implanted just beyond the first turn of her right ear's canal. What should I make of these traces? I struggle to design a trajectory that produces some sense. Perhaps she has gone to this seaside villa to exact revenge? To execute a heist? For it is not until the third evening that I at least begin to understand how it is I am receiving these terse messages:



A neural implant, I gather: a data recorder embedded beneath her hairline on her frontal cortex. Wirelessly relayed, I receive her thoughts instantly and directly on my screen, encouraging my anticipation of each subsequent one. Communication appears one-directional: the messages are mine to accept, share, and contemplate, but I cannot reply to her. They are not quite just any assortment of thoughts, however: they appear to constitute

the brusque, live-action debriefings of her mission. And so this continues—this stream of thoughts, once a day for an hour each evening—for another seven days, until she eventually engages in direct combat, completes her mission, and a helicopter rescues her from the dark nighttime sea.

This spy's story, to be clear, is staged. Staged by the *New Yorker*, in fact. Author Jennifer Egan wrote the story well before each of her spy-protagonist's thoughts, transferred into bytes of text, arrived to a reader as a tweet on Twitter. Serialized through the *New Yorker's* Twitter channel @NYerFiction, the totality of Jennifer Egan's short story "Black Box" clocks in at roughly 8,500 words, but more curious and exciting is the fact that Egan chooses to atomize the story into 606 tweets, each 140 characters or fewer, to allow delivery through Twitter to thousands of screens simultaneously. From 24 May 2012 through 2 June 2012, for one hour each evening, the story trickled onto the Twitter feeds of anyone subscribed to the *New Yorker's* Fiction channel. One reader, @erinsilk, reacted the event with the following message:



What @erinsilk senses is the episodic fireside appeal of Egan's serialized story: a protagonist's personal thoughts, shared intimately with individuals directly and instantly.

I also stage this spy's story. I stage it here, in this chapter, for the purpose of narrating an analysis of Egan's narrative. This appropriation is not without its consequences, and did not arrive inconsequentially. I first encountered "Black Box" not in the space of Twitter proper, but as a result of my own Twitter illiteracy. One afternoon in late May of 2012, I found a link online and read the story—scrolling downward—in its entirety and at my own pace on the *New Yorker's* website, which was not blocked by a paywall at the time. The story took on the visual design of a coherent collection of stanzas. But then the link to the story on the *New Yorker's* website irretrievably disappeared, and the story, for all I could see, vanished as well. Aware of its Twitter debut, I attempted to locate the cache of tweets on Twitter, but my scouring could not salvage the whole of Egan's tale. And so I reached for the literacy I did know, which involved asking a friend to copy the *New Yorker* magazine at the library, scan the story, and send it to me in an email. I could then 'read' the story comfortably using handy

genres to compass my determinations, and employ the well-practiced literary cues I had at my disposal after some twelve years of higher education. I was fooling myself, of course. “Black Box” continued a life on Twitter that ink and paper, in retrospect, left immobile. The scanned paper version my friend gave me was but one glimpse of an active information stream, and it edited away that which brought it germination and that which it went on to irrigate. One cannot extract a sample of water and claim to know everything about the river from which it was taken, for the river is everywhere at once: at the headwaters and at the delta, in the oxbows and at the rapids, at the dam and in the mountains. The story beckoned me forward to Twitter, forward to an intimidating cacophony of storytelling in which the spy’s voice did divulge its dialogue. I volunteer this anecdote to demonstrate the conclusion I draw from it: that reading and re-reading “Black Box” through various interfaces disciplined what I thought I knew about the story and what I thought I knew about reading. I embraced not just reading upward on Twitter, allowing fresh cogitations to sediment previous ones; “Black Box,” through its play of cerebral communication, insisted I learn how to heed, dismiss, and recalculate hypertextual c(l)ues and dialects, such time stamps, allusive hashtags, semantic severances, coy sub-tweets, ironies, and foul idiocies. A novel regime of semaphores demanded my consideration. Lured on by seemingly inexhaustible enjambments, different trajectories of textual and visual mobilities plied for my brain’s attention. In short, each encounter with “Black Box” re-characterized both the story and my practices of reading.

Throughout this dissertation, my analyses intervene in textual objects in order to understand the ways brains with character implicate reading and writing today. In this chapter, I locate a brain with character produced outside of an object’s textual perimeters. The spy of “Black Box” operates as a distributed brain. For one, although the spy’s brain is what ‘writes’ the actual text of the story, that brain speaks without hearing: communication is one-directional. In all of the 606 tweets that comprise “Black Box” there are no comments supplementing any of those tweets, and there are no ‘replies’ from that speaker to other Twitter users, which might otherwise demonstrate a dialogue with the spy’s brain. Secondly, the distribution of this spy’s brain speech through Twitter (and other media, as noted above) suggests that there is perhaps not a singular or original object to read. The spy’s brain produces legibility only as an effect of multiple readers and readings. That is, the brain with character located as a result of “Black Box” relies on readers gathering to the story and requires extra-textual interpretation. The “extra,” here, expresses the cooperative literacy

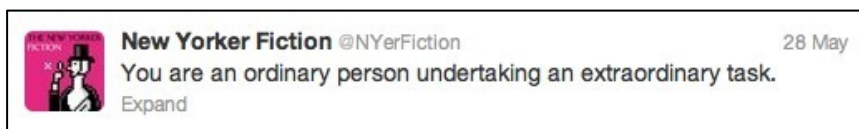
required to make meaning out of this particular brain with character. My analysis therefore pursues a cooperative reading far less than a cooperative writing of the brain from “Black Box.”

Two approaches that decenter the text of Egan’s “Black Box” compel this closing chapter forward. The first approaches the story’s premise: a quest, a data recorder saddled on a brain’s frontal lobe, and a possible future training protocol all announce the narrative and bring a reader toward it. The story positions a reader ‘in’ the brain looking outward. Thus, the way Egan’s story casts the protagonist’s neuroarchitecture—her thoughts emanating from an apparent neuro-prosthetic device implanted beneath her scalp—as both its narrator and the textual content deserves analytical attention. The second approach looks to the relationships “Black Box” acquires and disciplines through the Twitter platform, which engages the way we communicate about brains with character today. My approach does not constitute a critique of Twitter, but of this particular story’s legibility through Twitter. The brain from “Black Box” implicates how we cooperatively read thoughts as well as the consequences and entanglements from sharing them with others. I look closely at the discursive landscapes around Egan’s story to discover an approach to storytelling that manages to interrogate the act of reading accounts of brains with character.

Pressured by and pressuring the concept of neuronarrative one final time in this thesis, my encounter with “Black Box” helps me pluralize the operations behind generic contexts by venturing into extra-textual questions. Rather than categorizing the story as a neuronarrative or as a Twitter gimmick, I provoke insight into how “Black Box” implicates our understanding of science, networks, and storytelling today. To do so, I look to the ways narrative and network both interact and add complexity to science stories in culture. I introduce “Black Box” in the first section and solicit questions about its appearance, circulation, and context. In the second section I rehash issues surrounding the concept neuronarrative in order to question the demands and opportunities this generic ‘context’ bestows through “Black Box.” The final part approaches Egan’s story through the open archive of the internet, which helps to displace both context and genre in favor of new narrative understandings of the cooperative literacies from brains with character.

The Spy Who Thought Me

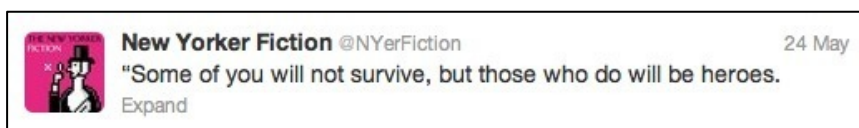
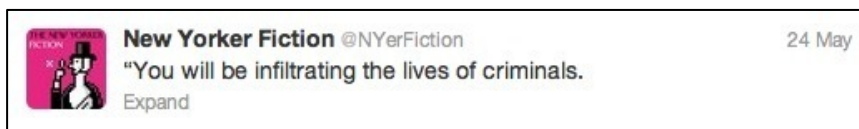
The storyline of “Black Box” follows a one-off espionage mission that takes place over the course of an afternoon and evening, although that knowledge slowly percolates to readers only after several days of the *New Yorker* broadcasting the story. In what the unnamed narrator-protagonist describes as “the new heroism” *in medias res*, readers are alerted that:

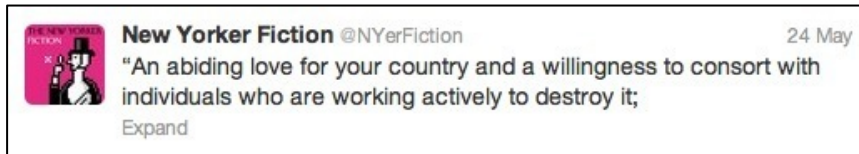


Indeed, the spy considers the gravity of her own ordinariness at one point:

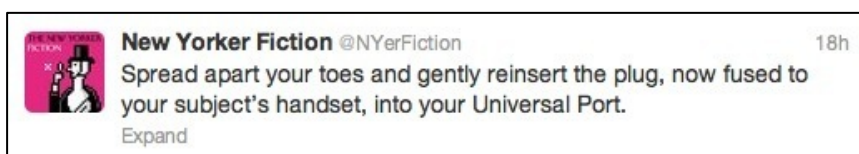


Whatever her professional skills before the point in her life when the story takes place, espionage training and protocol now augment her talents and physical abilities. The protagonist explicitly quotes the training she received from the intelligence-gathering agency within the first evening’s first few dozen tweets:



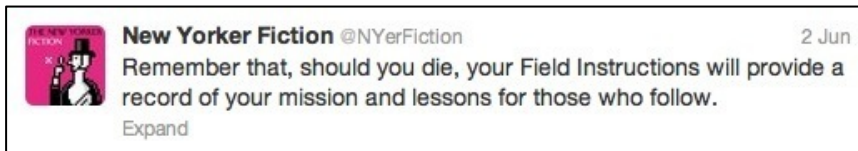
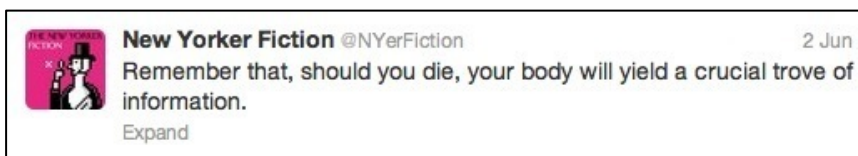


Something in the way of a plot begins to condense out of the hints in the above tweets by the fourth and fifth nights of the *New Yorker's* broadcast. Readers discover that this story's ordinary citizen serves her country (the United States) by allowing data recorders and wireless communication devices to be implanted into her body in order to seduce a high-profile terrorist and extract intelligence (through audio recordings, photos, and, of course, her cerebral debriefings) somewhere in the Mediterranean in southern France. Readers witness the protagonist dodging bullets, outwitting several playboy terrorists and their concubines, and, with her under-the-skin high-tech grafts, pulling off the biotechnical infiltration of a terrorist's opulent and fortified coastal lair. In terms of her mission, the climactic event occurs during the tweets broadcast the evening of 31 May. That night, she gumshoes her way into the bedroom of the terrorist villain while he sleeps and uploads—using a “Data Surge” technique—the contents of his personal device into a data port that is located between the toes of her right foot:





The villain awakes at this point in her task; they engage in a fight and the spy is shot in her right shoulder, but the spy escapes from the lair and she speeds away on a boat before her agency recovers her with a helicopter. Importantly, her physical body is the most vital piece of technological hardware for the intelligence agency because it both houses the information she liberates from the terrorist villain and contains the record of her accumulated thoughts:



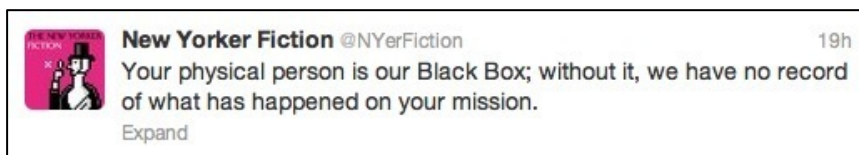
Thus, the Field Instructions from the spy's mission in question *is* the text of Egan's story "Black Box." While an exhilarating pasquinade of the prototypical hyper-masculine thriller, and while Egan's story certainly delivers on the speedboats and sleuthing around and consensually questionable sex so characteristic of spy stories, what I continue to find most interesting is the story's self-reflexive design and method of delivery. Its second-person narration directly addresses a reader, which commands one to 'read' the data impressed upon any Twitter-capable device by the spy's body: here, Egan's use of Twitter bestows the sense that the spy's brain is content, container, and conveyor.

The story frames each tweet as part of a set of mental notes for briefing future ordinary citizen-spies, and, reminiscent of David Markson's novels decades ago, maximizes use of clipped prose now germane to Twitter. As Jennifer Egan reflects in an interview with Deborah Treisman, the *New Yorker's* fiction editor,

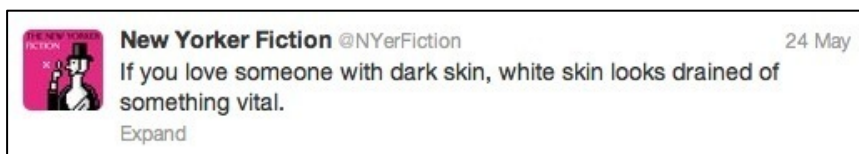
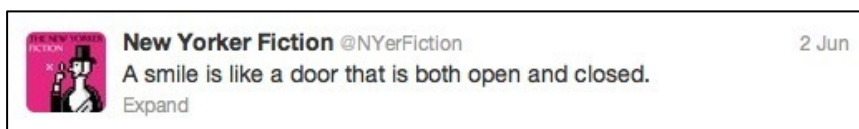
the premise is that these [tweets] are the thoughts of the protagonist, which are being recorded as part of her spy mission. But they take the form of lessons, and actually the working title of the piece was "Lessons Learned." The idea was that with each move she makes, or each thing that happens to her, she has a kind of reflection, which has a bit of a didactic quality to it. (qtd. in Treisman)

Implanted under her hairline and upon her frontal cortex, this neuro-prosthetic thought-recording device collects the impressions of her experiences. That is, recipients of this story witness direct thought-to-text speech. To be sure, there are other devices implanted in the spy's body—a Global Positioning System in her leg, a flash-capable camera in her eye, and that data port in her right foot—but it is the neuro-prosthetic device that structures the story's focalization and premise. The device is what tells the story to the reader, who ostensibly reads it on another device. Therefore, the story, comprehensively, constitutes a neural artifact: the ten days of tweets relay one spy's afternoon and evening's cognitive labor.

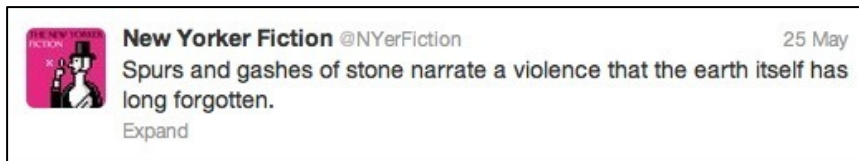
The title of Egan's story—and the significance of the story's second-person narration—eventually finds importance in one tweet occurring late in the narrative, from the evening of 1 July 2012. Just after the spy realizes she has been shot in the shoulder, she recalls that crucial memory told to her by the intelligence agency:



Because the narrator positions herself as a storage unit, a black box logging her mission, the act of reading the story becomes one where viewers are always peeking into, listening in on, or shining a light around her inner perceptions, reactions, and projections in the moment. A type of neural voyeurism. This is particularly salient in moments of text that harbor a haiku-like daydream quality to seemingly mission-irrelevant thoughts:



And, describing a shoreline:



The story explores—by performing—the very personal, internal complexity of espionage otherwise opaque to observation. Coupled with Egan’s use of the second-person “you,” this exploration contributes to “the feeling of virtual ‘presence’” through the text (Bell and Ensslin 312). As Monika Fludernik notes, “one of the more prominent emotional effects of second-person narration” is “its decidedly involving quality, which provokes much greater initial empathy with second-person protagonists than with first- or second-person characters” (Fludernik 286). These feelings of empathy and interiority further create a demand for the reader to “have an active role” in the fiction, because using present tense and imperatives in second-person narratives “create the illusion of being present in a storyworld that is constructed by the reader in creative collaboration with the programmed text” (Bell and Ensslin 313, 312). Importantly, although a reader is positioned inside the black box, this is not the same gesture as opening it. One gains access to the operations of the black box, but the box remains obscure: shy on detailed mechanics, readers are still forced to imagine how the neuroprosthetic device works, how those stored thoughts are actually relayed through networks, and, of course, why on earth the *New Yorker* is playing surrogate to a “stored” communiqué from a US-American intelligence agency. I find this interior obscurity more helpful than typical constructivist approaches to science and technology studies that crave opening the proverbial black box, because Egan’s story from the inside of the box inspires more culturally productive questions of the social and cultural circumstances that enable and constrain literacy of that interior.

While the tweeted story “Black Box” stands on its own, many readers may recognize its protagonist—Lulu—from the motley character network in Egan’s 2010 mixed-bag novel *A Visit from the Goon Squad*, which won the Pulitzer Prize for Fiction the following year. That novel also performs a type of literary mosaic: it contains a collection of linked short stories and tracks over thirty characters—all interrelated through social networks, family histories, or plot actions—throughout the (non-linear) course of nearly five decades. The parts of *Goon Squad* featuring Lulu disclose that she is no virgin to secrecy, espionage, or


dodgy clientele: her character’s mother, Dolly “La Doll” Peale, briefly works as a publicist and public relations choreographer for General B., a Qaddafi-esque genocidal dictator, and she brings a young Lulu along on one memorable chapter in the novel (*Goon Squad* 137-65). In a later section of *Goon Squad*, a twenty-something Lulu discloses that she married Joe, a Kenyan-born man who expatriated to the US and became naturalized there (336). Joe goes to college at Columbia and studies engineering, “becoming an expert in visual robotic technology that detects the slightest hint of irregular movement (the legacy of a childhood spent scanning the grass for lions)”; after marrying, the couple remains in New York, and we are told “he’ll invent a scanning device that becomes standard issue for crowd security.” (62). Details—i.e, stray thoughts from Lulu during her mission—corroborate the connection between the ordinary-citizen-spy of “Black Box” and the Lulu of *Goon Squad*:

 **New Yorker Fiction** @NYerFiction 19h
Your husband is an engineer.
Expand

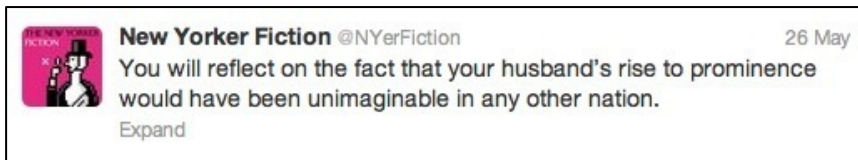
 **New Yorker Fiction** @NYerFiction 19h
Children raised among wild animals learn to detect irregular movements in their landscape.
Expand

 **New Yorker Fiction** @NYerFiction 19h
That particular awareness, coupled with scientific genius, has made your husband a national-security hero.
Expand

More details explain the couple’s relationship to government service, and give background to the drama of “Black Box”:

 **New Yorker Fiction** @NYerFiction 26 May
You will reflect on the fact that your husband, coming from a culture of tribal allegiance, understands and applauds your patriotism.
Expand

 **New Yorker Fiction** @NYerFiction 26 May
You will reflect on the fact that America is your husband’s chosen country, and that he loves it.
Expand



Readers of “Black Box” therefore reunite with a 33-year-old Lulu in her immediate brain-space as she engages in counterterrorism. While this character intertextuality is not crucial to comprehending “Black Box,” it adds strata to Egan’s fictional universe and allows readers to engage in more than one way to read or ‘hear’ particular voices within her network of characters and plots.

“Black Box” is set in a near future, “in about the 2030s,” but the story arc and details are utterly contemporary—both embracing and exploiting a data-saturated everyday life of personal narratives—to a familiar place where information is both means and ends (Egan, Interview). As noted, “Black Box” also appears, printed in a boxy tiled layout, in the *New Yorker’s* June 4 & 11, 2012 issue, which is devoted entirely to the theme of science fiction (a first for the magazine) and to which China Miéville, Junot Díaz, Ursula K. Le Guin, Ray Bradbury, Margaret Atwood, and William Gibson also contribute stories. William Gibson, author of *Neuromancer* and a darling of the sci-fi and steampunk world, observes in 2013—appropriately, in a public tweet—that stories labeled science fiction are not wholly dependent on the premise of “predicting the future,” but do cultural work through a “selective amplification of the present”:



While Lulu’s communiqués invoke a measured, programmatic instructive voice that could be dismissed as amplifying the dystopian sci-fi future of “brainhood”—“the property of *being*, instead of just *having* a brain” (6)—that a theorist like Fernando Vidal warns against with neuronarrative, the story’s content as Lulu’s cerebral “Field Instructions” to future heroines outsmarts this reduction of brain-based conceptions of the self and personhood. It achieves this through its character linkage with *Goon Squad*, retaining the obscurity of the black box, performing the narrative through second-person focalization, and, additionally, through a consequence of its governance from Twitter (we can observe a present and imagine a future

where cerebral activity exceeds 140 characters, for instance). The story's design amplifies instead a cultural fixation with brain telepathy through the type of pointed observation and muted sensation one might gather from the bulletins of a military wire as well as through imitating the networks of ubiquitous status updates that wirelessly roam and inscribe themselves on countless devices today.

The presence of the observed present arrives obliquely, in the manner through which the story is told. Perhaps Marco Roth, Gary Johnson, or the Ortega and Vidal team would not consider the neuronarrative genre to embrace "Black Box": there is no brain wound, no hospital ward to speak of throughout the narrative; there are no fMRI scans or anatomical geographies referenced; no neuroscientific jargon worth mentioning occurs; expositive digressions on the brain are no where to be found; in fact, at no point does Egan even employ the word brain. Yet, undeniably, a presumption of neurobiology frames the very occurrence of the narrative: Lulu's brain 'speaks' the story, and her recorded mental observations drive the action. Egan's literary device—a thought-broadcasting prosthetic appliance—makes use of current cultural fixations of neural enhancements (whether engineered through chemicals, mechanics, or electrical stimulation) that help comment on the conventions of narrative itself. "Texts do not simply have uses which are mapped out in advance by the genre: they are themselves *uses of genre*, performances of or allusions to the norms and conventions which form them and which they may, in turn, transform," writes John Frow (*Genre* 25). "Black Box" uses genres of neural enhancement and neural communication to speak back to the concept of neuronarrative in ways that, as I will analyze, transform conventions of narrativity.

Read discretely, "Black Box" engages many genres: the serial, the thriller, science fiction, trans-humanism, and with the Twitter platform, a contemporary form of interactive or hypertextual fiction. Read collectively, the tweets form the log of Lulu's mission and recall the narcissism of internet tagging, of instantaneous customer complaints, of mobile check-ins, of pithy extracts of blog posts, of citizen-journalists directly recording and sharing news, and the like. When assembled, the story's mission propulsion resonates with the increasing number of experiences and stories live-tweeted, like open-heart surgery, brain tumor excision, and child deliveries (Pappas). The thrill of a following a dicey operation step-by-step through one's mobile device "isn't just to show off what technology can do these days, it's to teach students and help patients," says one surgeon (Stern). Framed by the regulations and expectations of tweeting (through its use of Field Instructions), "Black Box" demonstrates a

way to consider both self-oriented externalized brain memories and community-oriented footprints and guidelines. The cooperation implied in both reading and writing the mental notes suggests a kinship with neuro-technologies already engineered (for instance, at the University of Washington), which allow “information extracted from one brain...[to] be transmitted to another brain..., ultimately allowing two humans to cooperatively perform a task” (Rao et al. 11). In kind, the specific way “Black Box” toys with the recursive curve Stephen Burn identifies in neurological narratives²⁸ (the story is made up of Lulu’s thoughts, and we use our brains to interpret, or ‘read,’ her brain) may help to rewrite this dissertation’s previous conceptions about the narration—who, and within what inhabited conditions—of neuroscientific information through character. I sense more than 140 characters producing narratives of Lulu’s brain.

Context Re-Hashed

Part of the question concerning the alignment of the concept neuronarrative within the parameters of genre has to do with the perception of context: the authorial and cultural crafting that prepares a reader to encounter a text in a particular way. Context here refers to “a system of social norms,” an ecology of conventions, affects, and familiarities into which a reader finds oneself and the story (Schmid). But what are the limitations of thinking genre and context together? John Frow, again, reminds us of the prevailing estimation of genre when he suggests that, popularly, “to speak of genre is to speak of what need not be said because it is already so forcefully presupposed” (*Genre* 93). Context is a term that can designate those presuppositions as one encounters literary objects, and, in turn, perhaps offers a way to reflect on the readers and writers who inhabit them.

The description of “Black Box” I offer in the preceding section—that there is a spy who executes a counterterrorist operation using implanted data recorders and the occasional combat moves—only makes coherent sense if one reads the story progressively, linearly, and unbroken at the time of initial tweeting. That is, if one reads it ‘in context.’ Two observations occur as a result. First, someone reading the story ‘live’ in 2012, as part of their Twitter stream if they had subscribed to (i.e., ‘followed’) @NYerFiction, would have confronted the story in fragments (one tweet per minute, for an hour each day over ten days), interrupted by all of the other tweets on their particular and personalized stream. During first publication, as

²⁸ See page 11.

made apparent in the tweet below, it is possible for one to have not known one was, as it were, reading a larger story:



As the tweet shows, one could have misread the initial tweets of “Black Box” as a technological malfunction, as evidence of a hack, or as general noise. A slippage between the imagined narratee and factual recipient occurs. Here, the idea that an interface and an algorithm could ‘lose its mind,’ as @ArdoOmer puts it, reflects how encountering even just fragments of Egan’s story destabilizes a scene of readiness for reading, and that the cognitive cues we use to mark narratives do not always guide us forward, but are sometimes marked only after initial contact.

A second observation concerning contact and context is that even if one was ‘in’ on the *New Yorker’s* Twitter project with Egan and prepared for its serialized delivery, the task of reading the story could have also incited a malfunctioning of that very task called ‘reading.’ The slowly budding tweets were ripe for interruption by everyday tweets from an individual’s larger Twitter stream: the story becomes shot-through with other ideas, advertisements, observations, and other fragments of knowledge, which reminds us of the difficulty of sustaining attention while being inundated by unrelated contexts.



Except, here, “unrelated” is not quite the correct word, for as user @docsanderson observes, Twitter’s unrelenting archival expansion *creates* unanticipated readings. When “everything becomes part of the story,” it becomes difficult, if not entirely unreasonable, to impose a universal, proper context. But if readers produce the brain telling the story because of the parts they bring to it while reading, it alerts us to the distributive importance of “Black Box.”

How do Lulu’s brain-thoughts become distributed? Importantly, @docsanderson uses the hashtag “#blackbox” to link his observation to a larger conversation about Egan’s piece.

However, this hashtag does not—for all time—direct one to conversations solely about Egan’s story. Today, in 2015, the tag #blackbox can direct one to everything from pictures of sushi meals, crashed or lost Malaysian airplanes, minimalist theatre productions, Argentinian films, cancelled US-American television shows, comic books, and, on occasion, Bruno Latour. Hashtags are a type of metadata label; designated through the use of the pound sign,²⁹ they are “a keyword assigned to information that describes a tweet and aides in searching” (Small 875). One does not need to be a Twitter user to follow the specific conversations, topics, or events around which hashtags organize, as they are searchable through Google. Hashtags can function as beacons on the internet, allowing people to find certain themes, locations, concepts, or objects. They can also be employed to express sentiments around a certain idea, such as anger, joy, irony, or sarcasm, which may well act like a grammatical punch line that forks, undercuts, couches, or reroutes the apparent face value of a statement. Their ability to connect and disconnect content and ideas on virtually all surfaces of the internet demonstrates the scalability of a cultural object like “Black Box,” where chatter across time and spaces, too, “becomes part of the story.”

In relation to genre, hashtags on Twitter do two main things. First, these metadata tags both import and refer to a particular database of dialogue as a shorthand way embedding an already-existing database of information. Second, their appearance calls attention to the act of dialogic production and the technological (algorithmic) infrastructure that underlies it. With regard to the question of context and “Black Box,” John Frow helps by writing that “We could think of genres as metadata—information about how to use information—that help define the possible uses of textual materials” (“Reproducibles” 1631). This thinking redirects the idea of reading texts ‘in-context’ from the idea that particular texts are contextually self-defining to one where the practice of reading implicates the very possibility of contexts.

Engagements with “Black Box” on Twitter also occur well after the initial broadcast in 2012. User @CaseyMarieNYC, in the spring of 2014, took two passages from the *New Yorker*’s print version of Egan’s story and tweeted them as a picture:

²⁹ Outside of North America the pound sign (#) may be known as a hash mark, number sign, hex, cross, or an octothorp.



The photo, concerning two lines of text where Lulu somewhat ironically meditates on US-American values of human rights, is prefaced by a single hashtag: #context. Without quite knowing @CaseyMarieNYC's personality—and not quite needing to—drawing attention to the context of “#context” forces a matter of interpretation, which is therefore a re-interpretation of Egan's text. I could interpret @CaseyMarieNYC's tweet as commentary on hypocrisies of US-American foreign posturing, on the “didactic quality” of Lulu's character, on counterterrorism, on a feminism she feels at work, or even on the diary-like delivery present in both utterances. The point I take from this use of Egan's story, is that, while @CaseyMarieNYC may be taking a genre cue from a theme underlying the story she detects, this particular tweet directs a reader to a new purpose adjacent to that story. The many possible contexts of “#context” invite interpretation, which, in turn, invites new narratives and commentary from Egan's narrative source.

Frow, again, helps us out here. “Genre cues act rather like context-sensitive drop-down menus in a software program, directing me to the layers and sublayers of information that respond to my particular and local purposes as a speaker, reader, or viewer,” he writes (“Reproducibles” 1631). Importantly, the directionality of those “context-sensitive” menus “is always a matter of interpretation, not of recognition,” for “choosing between these generic frames makes a crucial difference to how certain key passages are understood” (1631). As with “Black Box,” any passages encountered rest with the reader to decide which frame yields an intelligible and meaningful reading.

Apart from the *New Yorker's* print version and its audio version, other encounters with “Black Box” I discovered on Twitter productively problematize the idea of a scene of

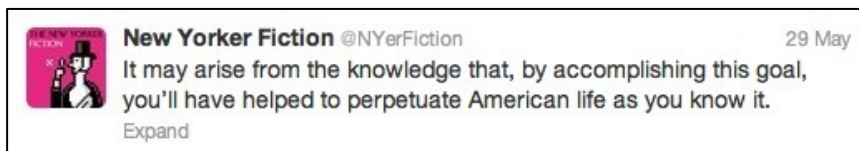
interpretation brokered by a single context or genre. Italian tweeters moved quickly on Egan’s story: about five months after the *New Yorker* tweeted “Black Box,” the Rome-based independent publishing house Minimum Fax tweeted a translation (by Matteo Colombo) of “Black Box” ahead of their e-book launch of the title. It took *Der Spiegel* another year after that to tweet “Black Box” in German, through the Twitter handle @Spiegel_Rezens. The Italian version, for example, took the following form:



The same passage in German:



And, for reference, the same passage in English:



An arm of the Dutch public broadcaster VPRO, VPRO Boeken [“VPRO Books”], tweeted a translation by Ton Heuvelmans (from *De Arbeiderspers*) in early January of 2014. The same passage quoted above, which VPRO split amongst two tweets due to character-length restrictions, appears the following way:



With minor differences in how each translated version partitions the set of tweets (for instance, VPRO Boeken broadcast the story over five nights for two hours each night while *Der Spiegel* stuck to the *New Yorker* format of one hour each night over ten days), the stories maintain a close approximation to Egan's script while imparting their own trajectories.

These translations, however, urge a curious set of questions about how readers encounter the story. I select the above passage purposefully—concerning the spy's successful mission as one that helps “perpetuate American life as you know it”—to demonstrate the cognitive friction occurring as a result of the story's distribution. If one maintains an engagement with the narrative as a readout of Lulu's direct cerebral thoughts, each translation is entirely unlike a film overdubbed into Italian, German, or Dutch. Maintaining the translations “in context” creates unanticipated readings. How, for instance, did a Dutch-thinking spy come into the employ of a US-American counterterrorism agency? Is that German-thinking agent working for US-American intelligence aware that an Italian agent went through—and recorded—a nearly identical experience with the same terrorist in southern France a year prior? Or it is the same, apparently multi-lingual, spy at work? What kinds of immigrant experiences are going on here? And what sorts of counterterrorism policies are the Americans really up to? Lastly, if we think about the bundled-together experiences of all the spies, it begins to sound like the setup of a familiar genre of jokes (an Italian spy, a German spy, and a Dutch spy all walk into a terrorist's lair...). Likely punch line about EU cosmopolitanism aside, I want to press that even entertaining the very possibility of this multicultural conjuncture shows me the analytical value of extra-textual contact and interpretation over intra-textual context and recognition. Without doing so, an engagement in-context misses out on the opportunity to critically analyze how genres produce and discipline literacies that help us acknowledge and understand particular stories in our neurological contemporary.

A final, and amusing, unexpected narrative as a result of Egan's story through Twitter comes from the user @LeVostreGC (better known as Chaucer Doth Tweet). @LeVostreGC is a Twitter user who writes all tweets in Chaucerian English, exchanges conversation with well-know writers (such as Margaret Atwood), and has nearly as many followers on Twitter as @NYerFiction. In May 2012, while the *New Yorker* broadcast Egan's story, @LeVostreGC used the hashtag #chauceregan and translated “Black Box” into fourteenth-century prose. One early example here:



And, for comparison, @NYerFiction's tweet:



What I love about this endeavor is that—first—I am authorized to imagine a medieval character engaging an allegory of neurological embodiment—and, second—that I can learn to spatially visualize texts as gatherings. By ‘gathering’ I mean a text that operates as a site that welcomes an assembly of readers from different places at any time. Here, the tweet does gathering work to convene a preposterous punctuality. Further, “Black Box,” as ‘new’ content on Twitter, gathers users toward stories related to (and sometimes not related to) this initial text; here, the hashtag #chauceregan situates an invitation for adjacent plots and interpretations to develop (since #chauceregan becomes one part of @LeVostreGC’s oeuvre):



While @LeVostreGC abandoned the #chauceregan project after about two dozen tweets, the opportunity to gather, here, displaces the idea that there is a single way to “read” Lulu’s brain, since 14th-century English (as well as Dutch, German, and Italian) works just fine. Rather than reducing Lulu to a cerebral subject in Vidal’s terms, quite the opposite realization occurs: the immediacy of the neuroprosthetic voice becomes displaced and distributed by the

pruning, severing, and retelling of Lulu's narrative through the cooperative convergence, interruption, and integration of others' thoughts.

Therefore, instead of appraising texts themselves as fingerprinted by genre, the above tweets rehashed through Frow cues me to think about reader choices. That is, the act of readers making choices between generic frames as they receive particular passages—whether in 2012 through the *New Yorker*, or today through myriad recycled or repurposed passages—produces differences to how “Black Box” is understood, circulated, re-understood, and misunderstood over time and across spaces. I value these differences because they speak back to the neurological premise and design of Egan's story: when reading a brain, one makes meanings of that brain, and when reading neuronarrative, one makes meaning of neuronarrative.

Cooperative Brain Narratives

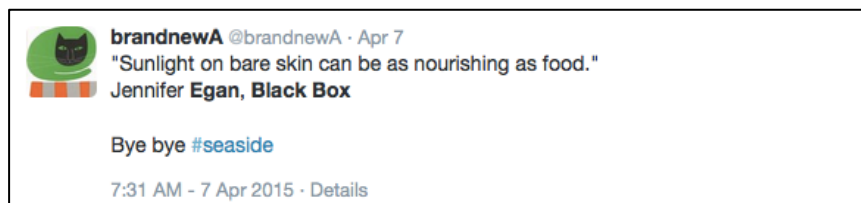
Although the tweeting of “Black Box” adds an appropriate staccato tension to the story, its serialization imparts not just space between thoughts, but time. Time between each tweet, as well as the years that have passed since initial tweeting. The six hundred and six tweets comprising Egan's original story are now part of the archive of Twitter and the larger internet. Those tweets, which comprise Lulu's brain thoughts, are now distributed and manipulated openly throughout our cultural archive.

One may retrieve “Black Box” from the internet in parts: by knowing precisely for what one searches on Twitter, or by encountering bits scattered on blogs or captured through partial re-tweets. As noted above, re-tweets perform the curious function of making others' thoughts, or some archived history, present. That is, one recalls fragments of the story through others' narratives, as evidence, memory, or interlinked traces.³⁰ In this sense, the contemporary discourse of Egan's story—invoking aspects of the form, content, or delivery mechanism—converts the story into information, which parallels how the story itself chronicles the encoding of Lulu's mental thoughts into tweet-sized narrative moments. A conversion into information also marks the consequence of her neuroprosthetic recording device: “The computer transforms the materiality of broken, inscribed pieces into the

³⁰ Apart from this, the *New Yorker* hold a complete version in their own magazine's online archive, which is passcode protected, and the *Best American Nonrequired Reading* anthologized an ink-transcribed version in 2012, recallable from hands on bookshelves and fingers flipping through paper.

immateriality of information” (Ernst 113). Lulu’s neural testimony of her counterterrorism experience—that is, her deposition of her counterintelligence work—becomes part of the vast information deposit that constitutes the open archive of the internet itself.

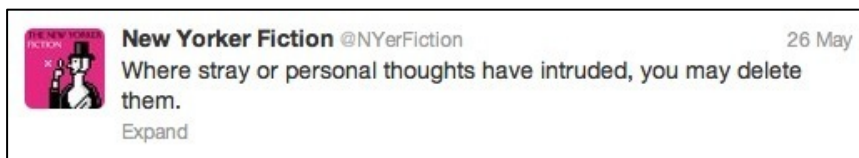
Instead of asking what “Black Box” is (what type of genre classifies this deposit, or what kind of literary modes characterize it), its relationship to the open archive of the internet pressures me to ask what can we *do* with it? What can we do with the brain that focalizes the story? Three tweets below inspire this question:



All three make use of found quotations from Egan’s story two or three years after initial publication through @NYerFiction. Each of the above users then sutures those quotes into new tweets in order to articulate a new story: the first, from @ErikaOnFire, makes a perhaps dark commentary on a junior seminar course at Mercy College (with additional references to the hectic nature of Twitter through the hashtag #toomanyhashtags); the second, an advertisement from an online photography magazine, repurposes Lulu’s own ideations on how technology benefitted her ability to become a spy in order to sell people professional camera equipment and promote the appreciation of photography; and the third, from 2015, quotes another of the daydream-like moments from the story in order for user @brandnewA

to bid farewell to a sun holiday (indicated through the subsequent hashtagged phrase “bye bye #seaside”). These three tweets help me understand the possible uses of “Black Box”: as soon as the story is inscribed as information on Twitter, the master narrative slips away, retreats to web trails and resurfaces to punctuate other narratives. The brain that speaks those tweets connects with other brains using the narrative archive of Twitter. I apprehend these uses as auspicious. @ErikaOnFire’s, @LensCulture’s, and @brandnewA’s repurposed quotations demonstrate a critical promise I find in the hypertextual afterlives of a cultural object like “Black Box”: that narratives converge *after* Egan’s story and create narrative affiliations and cooperative readings limited only by contact and imagination. My use of “imagination” here may be too quick, what do I mean by this?

Part of the risk of crafting a narrative with a character who, as Egan puts it, “has a recording device in her brain implanted by the government” in order to relay “a moment-to-moment record of what’s going on” is that the network of readers “have these elliptical segments floating in and out of their phone,” enabling, constraining, abusing, rearming, and mirroring the story *in* segments (Egan, interview). The moment in “Black Box” when Lulu reminds herself how,



she simultaneously produces a rupture in the narrative that self-reflexively describes the story’s futurity and mobility on Twitter. The “you” in Egan’s story frames Lulu’s memory of her training protocol; the “you” to which the multiplicity of contacted and contactable readers the tweet hails works to discipline the pruning, forging, and severing of the reader’s data over time: you may *use* them any way you can imagine. Lulu’s thoughts enter a database (in the game of fiction, a database for US-American intelligence services), but that database is conspicuously Twitter itself, which creates porosity between the data of the story’s thoughts and data of readers’ thoughts. This awareness begs the following realization:



Funny how closely that sentiment resembles a pervasive metaphor from the neurosciences, whereupon one's brain "stores information" for later retrieval (e.g., LeDoux, *Synaptic* 9, 31, *passim*; Arnold 86; Jackson 18). Further enticing a complexity between the story world and the reader's world, Ed Bullmore, professor of Neuroscience at the University of Cambridge, claims that "Twitter networks can be compared to the human brain network" ("Neuro-tweets"). But how do we 'read' the archives of these database-situated networks of thoughts? If Lulu's Field Instructions form part of a database of Field Instructions for intelligence and other ordinary citizen-spies, what occasions one to track her particular thoughts in the larger, open archive? What I love about "Black Box" is that it engages a strikingly similar question of our contemporary that Lev Manovich identifies: "What is the relationship between the database and another form that has traditionally dominated human culture—narrative?" (*Language* 218). It inspires the corollary question: what is our relationship between Lulu's brain data and the forms of reading we use to understand it?

Patricia Pisters takes up the concept of the open archive in her monograph *The Neuro-Image*. In one chapter, she analyzes "the strange 'archival life' of *The Battle of Algiers*" in order to demonstrate a politics of temporality at work in current digital screen culture (220). "Open archives," Pisters writes, "are characterized by ongoing contestation and extension that is increasingly facilitated by different new media strategies" (220). She tracks the afterlife of Gillo Pontecorvo's 1966 film through its numerous screenings by focusing on the audiences in attendance: in the 1960s and 1970s, "the Black Panthers, the Maoist Weather Underground Movement, the PLO, and the IRA" all "used" the film "as training material, lifting from it specific guerilla tactics against oppression" (230); in the First Intifada, the film was "used in political arguments both for and against the [Israeli] occupation and escalation of violence against Palestinians" during its residency at a Tel Aviv cinémathèque (232); and in 2003 "the film was screened at the Pentagon" because it "was found useful among members of the US government as a tactical lesson for military operations in Baghdad" (232). The remixes and "digital afterlives" of *Algiers* that Pisters identifies "puts" the film "in a hyperhistoric context" (235) of database logic, one which,

on the one hand...allows the opening of the archive to more and revised historical knowledge, and on the other hand...makes history more vulnerable to an overflow of seemingly unconnected data, pure pathos, and "inappropriate appropriations" that

make contextual information (about the various perspectives) all the more important. (237)

Here I want to pause on the notions of “inappropriate appropriations” and “context” that Pisters (rightly, in her object of analysis) identifies as a risk that open archives invite. If the “digital afterlives” of *The Battle of Algiers*, as Pisters poses, rewrites and “forms our imagination of the Algerian War of Independence, other wars of decolonization, terrorism, and counterterrorism in the past and the present,” then the initial ‘context’ of the film—some hypothetical abundance of surface meanings inherent to the film—is indeed important and, in fact, creates a horizon for “the ‘script’ of the film” as “limited in terms of the identification and referentiality it promises” (237, 233-34). Crucially, Pisters writes that the recombination of historical elements the database permits makes “us more conscious of the complex layers of historical events and their relations to the present,” and hence the simultaneous “benefits and risks” of perspectives “in our collective consciousness” (237). However, the meaning of context as well as the meanings taken from contextual information, as I analyze in the previous sections above, depend on how we imagine contact, in time and in space, with cultural objects. Many itineraries produce contact with many contexts. And the possible meanings of ‘imagination,’ as I enticed earlier, depend on how one visualizes, senses, and responds to contact. The “digital afterlives” of “Black Box” demonstrate that each encounter of each appropriation defines each ‘useful’ context. Following this, the question of “inappropriate appropriations” becomes meaningful only if we seek to reinforce traditional conventions of ‘reading’ narrative: that it ought to be sequential, linear, progressive, cohesive, and with an identifiable beginning and end.

The story’s admixture in the open archive permits felicitous possibilities. The crucial aspect of “Black Box” on Twitter is that “tweets are not directed to one particular user but to the whole world” (Kaplan and Haenlein 107). Therefore, “the information pushed to a user’s followers may be read and immediately forgotten; in other cases, it may not even be read at all” (107). Tweets, including Egan’s 606 from “Black Box,” are not directed to a single reader, but are broadcast publicly to any reader who gathers around it (or parts of it). This motility permits an “initial tweet” to “then cascade down from one user’s follower network to another’s, and on the way transform from a simple bit of information to word-of-mouth” (107). Messages open to imagination, to games of re-tweeting, or to artistic and communicative practices like pastiche, parody, satire, and play:

There's potential on Twitter for wild formal invention. Rather than just fiction tweeted, *writers could find narrative in* retweets, faves, blocks, and unfollows, and write in not just words but images, GIFs, emoji, and hyperlinks. Characters might exist as different Twitter handles, put in conversation, or else many characters subtly inhabiting a single account. It would wade into the messiness of parody accounts, anonymous mystery accounts, brand accounts, fake brand accounts, bots, and real people posing as bots. (Crouch; my emphasis)

One *finds* narrative through interaction with the Twitter database and the larger internet database: stories are governed, therefore, by location and allocation, and by the play of context. The foraging for stories and trajectories involved therefore reasserts that “things—artifacts, media, or technologies—can have a cognitive life, with histories often as idiosyncratic as those of the embodied brains with which they couple” (Sutton 189). Contact with existing information in the database of Twitter, and one's responses to that contact, are limited only by the imagination of the user and the limits of possible algorithmic in(ter)ventions. In other words, “users are free to add to stories all throughout Twitter” (Peys 8-9). In addition, “there are also the torrents of comments, video responses, tag-sets,” and other devices to write stories, which “reveals numerous other strata” to the database itself (Alexander and Levine 47). These types of “content repurposing, redesign, and republication can open up problems of version or content control, yet in return, it offers the possible harvesting of the storytelling energies of the creative world” (48). The outcome, in terms of the database logic of Twitter formed by clusters and movements of hypertext, is that “there is no telling how borders between texts will have been reappropriated and reimagined” (Rosello 122). The payoff I detect in this scene of literary world-formation, is that realizing the narrative potential of the digital afterlives of tweets requires us to shed conditioned the reflexes we employ to contextualize practices of reading and writing. The formal, intra-textual way of reading Lulu's brain fails: we read and re-read by way of the distributed links her thoughts have with others' thoughts. Cooperative reading shapes this brain with character.

What implications might these new cooperative reflexes have for an engagement of “Black Box” and conceptions of neuronarrative? The internet, as Manovich puts it, is “now a giant open archive,” constituted by an ever-expanding accumulation of data deposits (*Language* 223). In kind, the tweet occurring early on in “Black Box,” when readers are told how Lulu's Field Instructions (the catalogue of her cerebral thoughts during the mission) are “stored” in her body, finds itself in concourse with that pervasive metaphor from the

neurosciences: appraising brains as black boxes which contain information that investigation alone can ‘open’ or ‘unlock’ in order to read the brain’s secrets ‘within’ (e.g., Wolfe; Carsrud and Brännback; Lajante et al.; Becker, Cropanzano, and Sanfey). The metaphor of the brain as a containerized cache of information within the skull’s chamber fuels many theories, analyses, and stories. From the myth of Minerva emerging from Jupiter’s brain, to Freud’s attempts to open the ‘black box’ of the unconscious and the behaviorism which took that image earnestly, to Assimov’s fictional voyage into the brain in *Destination Brain*, the brain continues to figure as a site of cultural imagining that awaits disclosure of its secrets. Figured as a trove of information that continuously produces, files, and calculates information, the image of the brain collides with the image of the library, whereupon enough rigor given to reading its collected information rewards researchers with new insights about its content’s functions and possibilities. It is important at this point to recall that among the goals driving the neurosciences is an effort to materialize this metaphor: to manufacture storable data from immaterial knowledge of the brain, to organize the brain into information, to accumulate and to inventory a total depository of knowledge of the brain (such as the Allen Brain Atlas, the Human Connectome Project, and the EU’s Human Brain Project). But, then again, we have heard this fantasy before: Borges considers it in “The Total Library” (and “The Library of Babel”) when he speaks of “the fancy or the imagination or the utopia of the Total Library” (“Total” 214). Could “Black Box” offer a glimpse into the writing and reading of that total neural archive through the story of one particular person’s thoughts as they perform the task of writing and reading a portion of their own contribution to the grander “trove of information”? Yes, but therein lies the catch: instead of telling one story—the cohesive 606 tweeted thoughts comprising “Black Box”—Twitter’s archive supports only the evidence of a story—in its deposits, in its detritus—and therefore disciplines users to become readers by inviting each to find a story from it themselves. The “utopia” of an exhaustive archive of thoughts abuts the utopia of an exhaustive comprehension of that archive. Comprehension eludes the sovereign reader and exposes the cooperative literacy “Black Box” reflects.

“Black Box” and the “wild formal invention” of appropriations put serious pressure on a normative understanding of neuronarrative, one that venerates genres as communally held forms of recognition. But if genres are modes of cultural creation and interpretation, they also are shaping forces for articulations of lived experience, which in turn continue to shape those modes. “Black Box” and its afterlives help energize ways through the contemporary consensus

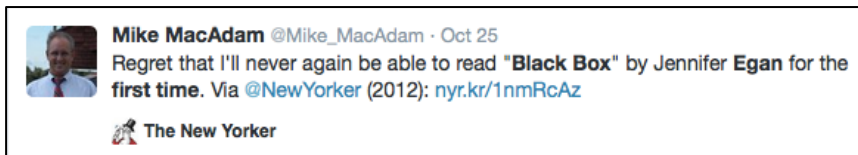
of genres as only a set of limitations on imagination: extra-textual operations of brains with character. The critical promise I recognize as a result is that even if we manage to create a universal database of the brain that both exhausts and reports all possible metrics and measurements, narratives *about* that database are required to make sense of it, to orient us with it. That hypothetical database demands cooperative reading. And ultimately, each reading of the brain—that is, each articulation of the contents of the black-box body (that proverbial body of evidence)—also works to shape the imagined limitations of communally held forms of the brain.

There is, however, a detractor I spy on the horizon. Manovich does not fully share my enthusiasm for the many narrative possibilities of the open archive into which “Black Box” finds itself scattered. Wagering that the “database and narrative are natural enemies,” Manovich asserts that each compete “for the same territory of human culture” (*Language* 225). Here, he is hung up on the term narrative. “Narrative,” he writes, “is constructed by linking elements of this database in a particular order, that is by designing a trajectory leading from one element to another” (231). Narratives are designed carefully. Actually, correcting his sentence to make it active (‘database *users* construct particularly linked elements, and database *users* design a trajectory’) reveals two things: one, the undercover agents doing the hidden work of his theory, and, two, his theory’s predilection for identifying outcomes (orderly narrative) over operations (users who make them). What does he consider narrative, then? He appeals to the authority of Mieke Bal, whom he quotes to police “arbitrary” sequences of data: certain sequences do not “qualify” as narratives if they do not satisfy “a number of criteria,” which hinge on the need for the contents of narrative to be “a series of connected events caused or experienced by actors” (227). If we’re talking about tweeted thoughts, does the term narrative still yield to formalist constraints of structuralist narratology? Or, the better questions, rather: when, and for whom, does the term still yield to narratological constraints? The latter questions clarify that Manovich feels the need to corral narrative into formal constraints when he persists on obtaining context and coherence in texts alone. However, to again rephrase Manovich’s quote of Bal actively: *actors* cause or experience a series of connected events called narrative. At a minimum, both timeliness and “paratextual mechanisms” determine calling them such, which assists to clarify that actors eventualize connections to form narrative (Green). Bal herself provides a rejoinder to Manovich’s guarding of the term narrative:

Like semiotics, narratology applies to virtually every cultural object. Not that everything 'is' narrative; but practically everything in culture has a narrative aspect to it, or at the very least can be perceived, interpreted as narrative. (225)

Where and when “narrative ‘occurs’” for Bal remains a matter of interpretation, not of recognition (225). I cherish that Bal trusts in narrative occurrences not only in media objects, but through mediators who design and construct occurrences around and across objects. What Manovich overlooks—both grammatically and argumentatively—in his desire to qualify texts as self-evidently narrative or not, are those crucial transactions and interactions amongst actors themselves.

Because the “contestation and extension” characteristic of the open archive Pisters identifies is indeed “ongoing,” I suggest earlier—by connecting elements from the neuroscientific quest to fully document the brain—that we must still produce narratives to account for that database. Here, at least, Manovich and I find agreement: “a database can support narrative, but there is nothing in the logic of the medium itself that would foster its generation” (*Language* 228). “We” must generate narratives in order to order, navigate, comprehend, share, account for, analyze, contest, extend, and even obscure an “ongoing” collection of information. And where stray thoughts intrude, we may delete them. I say narratives may “obscure” both the database and other narratives because I want to amplify the narrative uses that imaginative trajectories and linkages allow. My confession near the opening of this chapter of the challenges of staging both my summary of “Black Box” and my analysis of it attests to the many opaque, meaningless, and idiotic trajectories, dialects, and symbols I encountered. Narratives can distribute opacities within the ongoing database. As Michael Toolan interjects, where a text’s, a narrative’s, or “an utterance’s relevance, orderliness, informativeness and truthfulness is not obvious, a search for their covert presence is warranted” (Toolan). The “search” for meaning, which comports with Ian Crouch’s earlier observation that Twitter users may “find narrative” in re-tweets, blocks, follows, hashtags, etc., testifies to the fact that narrative meaning-making takes work and requires interpretation. And it continues to demand this activity:



As one user @Mike_MacAdam, in autumn 2014, publicly yearns to read “Black Box” “for the first time.” Importantly, his tweet’s “regret” terminates with a link to the *New Yorker*’s online record of “Black Box”: the version purified of Twitter’s rowdy involvement, the one that artificially segregates the active database from becoming ‘part of the story,’ the one I first encountered. When Manovich writes that “the ‘user’ of a narrative is traversing a database, following links between its records as established by the database’s creator,” his grammar fortifies a temptation to which I, too, succumbed early on in my relationship with Egan’s story: of understanding database users as passive followers (*Language* 227). It dismisses how we cooperatively read characters. What the persistence of “Black Box” teaches is that this passive role is a fantasy relying on an old, hierarchical paradigm between the browser and the scribe, and the reader and the composer (Rosello 137). Hailed by Lulu’s own “thought,” I ascertain that how “you” work the database—here, Lulu’s brain, Egan’s story, and Twitter’s archive of that brain with character, and where my use of ‘work’ challenges received understandings of reading—promises cooperative ongoing interpretive and narrative complexity.

This closing chapter analyzes how Lulu’s brain from “Black Box” incites cooperative readings to make that brain legible. Egan’s narrative, and the many narrative uses of it, helps engage meaningful questions about what is read, what is written, what is witnessed, and what is integrated in a frame of neuronarrative. The neuroprosthetic conceit that “Black Box” enfold— which allows Lulu’s brain to speak with others’ interfaced thoughts—critically pluralizes the site and event of the cerebral subject, and aids in hearing the multivocal narrative practices that contest, extend, and attempt to account for neuronarrative. This insight implicates the ways neuronarrative users conceptually partition, authorize, and distribute the ongoing cultural and scientific database of neuroscience. Ralf Neumann reports that “papers published between 1996 and 2007 in the 221 journals of *Web of Science*’s category ‘neuroscience’” total 397,534 (Neumann 33). That heart-stopping statistic is already nearly ten years old. A quick search I performed, of PubMed-indexed articles from 1996 through April 2015 that contain “neuron,” “brain,” or “neuroscience” in their titles or

abstracts, offers an astonishing 537,108 available publications. Less a reservoir than an enduring current of information data, for neuroscientists and writers it characterizes the fantastic amount of reading available to inform narrative departures. That database is simultaneously unaccountable (given the fantasy of reading the total archive sovereignly) as well as utterly accountable (given the desire and need for reports, stories, experiments, explanations, and art that both respond and extend it). Narrative is an emergent property in the distributed transactions of neuroscientific knowledge, data, and technology. For Kenneth Goldsmith, poet and instructor of Poetics and Poetic Practice at the University of Pennsylvania, Twitter's database represents a parable of our contemporary "landscape of language," and therefore encourages critics to "call into question the way we write and the environment into which we're writing and distributing our works" (Interview). It strikes me as a way to articulate the work of genre as both tactic and condition of inhabiting knowledge-as-database, one that inspires trajectories of reading and writing the very desires and ideologies that both shape and inform the ways we manipulate those tactics and conditions. When John Frow laments how "genre continues to be considered a matter of the categorization of texts rather than a matter of the textual categorization and mobilization of information about the world," I happily consider the mobilizations of information that the narrative thicket of "Black Box" continues to permit and inspire ("Reproducibles" 1632-33). Here, analyzing the extra-textual operators of Lulu's brain helps transform the opportunities we have to read, and therefore to inhabit, neuronarrative.