Somatic Networks and Molecular Hacking in *Eastern Standard Tribe*

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> I believe that we live in an era where anything that can be expressed
> as bits will be. I believe that bits exist to be copied [. . .]. Me, I'm
> looking to find ways to use copying to make more money and it's
> working: enlisting my readers as evangelists for my work and giving
> them free ebooks to distribute sells more books. As Tim O'Reilly
> says, my problem isn't piracy, it's obscurity.
>
> — Cory Doctorow ("About")

■ An ongoing battle in the contemporary cultural sphere has to do with the relationship between advanced technologies and consumerism, economics, and artistic creativity. The skirmishes and legal warfare over MP3 file-sharing, (il)legal file downloads, alleged copyright violations, and the very ownership of bits have given fodder to such groups as the Recording Industry Association of America and Hollywood studios to proclaim the impending demise of the music and/or film industries as a consequence of digital downloading and online piracy. This millennium has been marked by lawsuits launched against internet service providers, peer-to-peer software companies, and individual users and consumers. On the other hand, in 2006 Apple's iTunes reported its one-billionth legal music file download (at a per-download cost of 99¢) while Warner Brothers reached a deal with BitTorrent to allow online sales of its films, clearly

demonstrating that profits can be netted through online mediums while also protecting artistic expression and intellectual property. The publishing industry is no different when it comes to facing the challenges of the digital marketplace. "Publishers Go Digital," an article in the January 2006 issue of *Locus*, reports that Random House, HarperCollins, and Amazon.com are all (beta)testing online delivery of texts: a per-page fee for both Random House and Amazon.com and a digital archive for HarperCollins. The article quotes Random House's corporate development president Richard Sarnoff acknowledging "that a generation is growing up that may not have the same visceral connection with the book format . . . . They have read as much on screens as they have on paper." The article then goes on to conclude that "[t]he consensus seems to be that digital publishing and online book publishing are inevitable—now it's just a question of how" (10).

One of the most prolific figures in the science fiction community exploring the *how* of online publishing is Cory Doctorow. Doctorow's career has been marked by his intimacy with technoculture, including his work as an sf author, his tenure as the Director of European Affairs for the Electronic Frontier Foundation (2002-2006), his status as co-editor of the immensely popular *Boing Boing* internet blog, and his written contributions to such publications as *Wired* magazine. He is a figure whose prolific work has prompted Bruce Sterling to remark: "I know many science fiction writers engaged in the cyberworld, but Cory Doctorow is a native." What makes Doctorow particularly fascinating as a cultural figure of new media is not only the issues and territories he maps in his works but also the manner by which he takes full advantage of the digital marketplace to embody, distribute, and market his content. For example, his novels *Down and Out in the Magic Kingdom* (2003), *Eastern Standard Tribe* (2004), and *Someone Comes to Town, Someone Leaves Town* (2005) have been published in online formats and are freely available on his website (www.craphound.com). *Down and Out in the Magic Kindgom* has had fans submit alternative cover art, convert the novel into a poetry remix, and "translate" the novel into Opish. In addition, Doctorow's 2006 Hugo-nominated "I, Robot" is available as a 5-part podcast and his 2004 story "Unwirer," co-written with Charles Stross (whose 2006 Hugo-nominated *Accelerando* was available for free download from Amazon.com and is available for purchase in e-book format), was written "in public, using a Movable Type blog. We exposed the whole process to the public, letting everyone see (and participate in!) the writing process" (Doctorow, "Unwirer"). Finally, *Eastern Standard Tribe* is freely available in as many as 29 different file formats.

Unlike perhaps many of his contemporaries Doctorow is actively using and exploring technological mediums to (re)write his narratives for the new media age of computer downloads, Palm Pilots, BlackBerrys, and cellphone

displays while also protecting artist's intellectual property. As Doctorow explained in 2004 at the O'Reilly Emerging Technologies conference, a synergy among artists, online technologies, and a wired-savvy audience ushers in an "[i]ncreased democratic-ness [which] translates into decreased control [. . . and] that decreased control demands a new copyright regime that rebalances the rights of creators with their audiences" ("Ebooks"). Online Creative Commons licenses are particularly useful in this "new democracy" and have been used by Doctorow for most of his work. As Eric Mason explains in his online analysis of *Down and Out in the Magic Kindgom*,

> Readers responded to Doctorow's release of *DOMK* by voluntarily increasing Doctorow's readership by hyping (and distributing) the novel via listservs, online chat, blogs, and other media [. . .]. Readers also voluntarily produced most of the alternative electronic formats that allow readers to access the novel on numerous hand-held electronic devices. Readers with expertise in *existing* technologies thus played a part in the success of *DOMK*, in which *imagined* technologies predominate. In part, this success was due to the text's Creative Commons license and its method of distribution (the Internet) sharing a common technologicity: the distributed network.

The same can be said of *Eastern Standard Tribe* wherein a common technologicity was embraced; for example, Doctorow released early drafts of the novel online and allowed his readers to edit the content before final production. In addition, Creative Commons licensing has allowed *Eastern Standard Tribe* to emerge in perhaps-unexpected formats: Trevor Smith has converted it into a speed reader format that projects the novel one-word-at-a-time inside a Java applet on the personal computer and Crutcher Dunnavant has adapted the one-word-at-a-time speed-reader format to run on Java-capable mobile phones.

Aside from its multiple instantiations in different media, what also makes *Eastern Standard Tribe* particularly interesting is the relative absence of traditional sf tropes. Although ostensibly set in a near-future setting of Boston and London, circa 2022, *Eastern Standard Tribe* overtly collapses the distinctions between the *imagined* technologies of the fictional spaces and the *existing* technologies of the contemporary world. Reality is (science) fiction; (science) fiction is reality. In other words, the issues Doctorow explores in the novel—issues of creative licensing and control, peer interaction, and a new technologicity—are extensions of the issues Doctorow tackles in the various facets of his professional career and the very production/distribution of his work. For these reasons the Tor-version[1] of *Eastern Standard Tribe*—a novel described by William Gibson as "utterly contemporary and deeply peculiar"—might be thought of as a "post-genre science fiction" or "future-present" novel[2]

that stages the same issues in the narrative that Doctorow faces and engages in the new technologicity of today's distributed networks. *Eastern Standard Tribe* explores issues of end-user hostility, peer-to-peer networking, and contemporary pattern recognitions and then posits a communal synergy emerging from the splicing of a hacker ethic with a molecular approach to the technologicity of distributed networks.

End-User Hostility, Tribalism, and Hacker Ethics

The protagonist of *Eastern Standard Tribe* is Art Berry. He is depicted in the beginning of the novel on the roof of a Boston sanatorium where he has been incarcerated following a violent reaction to a betrayal by those closest to him: his girlfriend Linda and his best friend Fede. While contemplating whether he should shove a pencil up his nose to perform a "homebrew lobotomy" (11), Art recollects recent events that led to his incarceration. The novel continues in this dual-temporal mode as we witness these past events while also witnessing Art's attempt to get off the roof and escape the sanatorium.[3] A chief problem afflicting Art—both roof-Art and flashback-Art—is sleep deprivation, a cmmon side-effect arising from his affiliation with the Eastern Standard Tribe. Tribes are communities of people whose loyalty to one another is organized according to time-zones and enabled through the ubiquity of portable communications technologies (comms). Art explains Tribalism in his group therapy session when he is in the sanatorium:

> You live in Arizona, but you're sixteen years old and all your neighbors are eighty-five, and you get ten billion channels of media on your desktop. All the good stuff—everything that tickles you—comes out of some clique of hyperurban club-kids in South Philly. They're making cool art, music, clothes. You read their mailing lists and you can tell that they're exactly the kind of people who'd really appreciate you for who you are [. . .]. Online, you can be a peer [. . .]. Only you can't. You can't, because they chat at seven AM while they're getting ready for school. They chat at five PM, while they're working on their homework. Their late nights end at three AM. But those are their *local* times, not yours. If you get up at seven, they're already at school, 'cause it's ten there.
>
> So you start to *eff* with your sleep schedule. You get up at four AM so you can chat with your friends. You go to bed at nine, 'cause that's when they go to bed [. . .]. You end up hardly sleeping at all, you end up sneaking naps in the middle of the day, or after dinner, trying to reconcile biological imperatives with cultural ones. (111-12)

Art goes on to explain that Tribalism emerges out of a new sense of allegiance and loyalty. Tribes such as the Eastern Standard Tribe are "[p]eople all over the world who are really secret agents for some other time zone, some other

way of looking at the world, some other zeitgeist [. . .]. Tribes are *agendas*. Aesthetics. Ethos. Traditions. Ways of getting things done" (112). Tribalists are drawn towards one another out of a sense of Tribal affiliation; thus, a "Tribesman will patronize a fellow Tribesman's restaurant, or give him a manufacturing contract, or hire his taxi. Not because of xenophobia, but because of homophilia: I know that my Tribesman's taxi will conduct its way through traffic in a way that I'm comfortable with, whether I'm in San Francisco, Boston, London or Calcutta" (113). The Tribes emerge as alternative social environments that challenge national boundaries and circadian rhythms while offering a communal sensibility based on a distributed network of peers, a Tribal technologicity.

Art's loyalty as an ESTribalist informs his profession as a Tribal agent-provocateur; namely, as we learn through roof-Art's flashbacks his London cover is as a user-experience consultant for Virgin/Deutsche Telekom (V/DT), located in Greenwich Mean Time. In that position he covertly mires V/DT in red-tape and user licensing agreements that slow down the corporate machin-ery and/or lead to consumer frustration and hostility. For example, "[t]he last policy binder he'd dumped on V/DT had contained enough obscure leave-grant-ing clauses that an employee who was sufficiently lawyer-minded could con-ceivably claim 450 days of paid leave a year" (32). Art's chief project is to design and implement a new pay-per-use system for music file-sharing among cars travelling the I-90 Massachusetts Turnpike (MassPike). As Art explains to Fede, a fellow Tribalist and his agent-provocateur compatriot, there are many ways for file-sharing system to legitimately work in the best interests of the end-user, the recording artists, and the MassPike; however, he is "modeling a system that has a clickthrough every time you cue up a new song" while as-sembling a V/DT peer review group stacked "with total assholes who love manuals and following rules [. . .]. They'll mock up the whole system and march right into MassPike with it, grinning like idiots" (88).

During the process of sabotaging V/DT's proposed MassPike network, Art envisions an alternative music-download system, one in direct contra-distinc-tion to the deliberately flawed system he has developed for V/DT: he conceives of turning cars into legal portable and mobile radio stations through an elaborate distributed network. His peer networking of cars is inspired by war-drivers who, stuck in traffic or perpetually navigating the MassPike, illegally download mu-sic files and then circumvent the payment system, thereby "running bootleg op-erations out of their cars that put poor old Napster to shame for sheer volume" (93). Art explains the system to Fede:

> You drive around on the MassPike, and your car automatically peers with nearby
> vehicles. It grabs the current song on someone else's stereo and streamloads it. You
> listen to it. If you don't hit the fast-forward button, the car starts grabbing everything

it can from the peer, all the music on the stereo, and cues it up for continued play. Once that pool is exhausted, it queries your peer for a list of its peers—the cars that it's getting its music from—and sees if any of them are in range, and downloads from them. So, it's like you're exploring a taste-network, doing an automated, guided search through traffic for the car whose owner has collected the music you most want to listen to [. . .]. And if you exhaust all the available cars, the system recycles, but asks its peers for files collected from other sources. (119-20)

Art recognizes that redesigning illegal war-driving into a legal user-friendly system based on a technologicity of peer networking and legal downloads facilitates a new pattern of peer interaction. This would allow the distribution of music in a manner based on *peeracy* rather than piracy. This is a distributed network merged with the demands of an economic marketplace and peer-to-peer interaction that does not infringe on intellectual property nor is predisposed to end-user hostility. Much like Doctorow's use of technology is allowing him creative means of legally distributing his fiction while offering copyright protection as an artist, Art's creative licensing legitimizes the technologocity of war-driving by merging it with an established payment system, a new synergy.

This revolutionary synergy is the impetus for his betrayal by Linda and Fede who hijack the idea and shop it for the highest price to EST competitors. It is Art's violent attack on Fede following his betrayal that prompts his subsequent incarceration in the Boston sanatorium. However, this betrayal is not particularly surprising as Doctorow symbolically structures the two conspirators in antithetical ways to Art's characterization. First, Art and Linda are the opposite of one another in their dispositions, a fact made evident the differences between debating and arguing. In Chapter Two Doctorow writes that "Art Berry was born to argue" (13) and then goes on to show that he has a keen mind when it comes to argumentative debating. Linda, on the other hand, "didn't like to argue—fight: yes, argue: no" (39). This is plainly evident in her unpredictable mood swings. For example, she visits Art at the O'Malley House usability lab where he works. When he offers to introduce her to Fede she becomes irate, accuses him of pushing their relationship and playing headgames, and then tells him "[d]on't take that tone with me" (131) when she believes he is shouting at her. Moments later the storm blows over and she allows Art to introduce her to Fede. Later, in an intimate scene Art asks Linda to tell him something unrehearsed about herself. Her fingers stiffen, she becomes snappish ("That's a stupid request" (74)), and then accuses him of trying to get under her skin. These types of emotional scenes are repeated throughout the narrative, a direct contrast to Art's relatively consistent calm and reasoned demeanour. He allows her into his life—even going so far as to loan her his comm, an action considered blasphemous to a Tribalist —while she repeatedly resists intimacy and deflects him with emotional outbursts.

Loyalty and honesty are also contentious issues. Where Art is loyal to the Eastern Standard Tribe during his agent-provocateur duties, Linda seems loyal only to herself and is repeatedly in the process of brokering deals. This is made explicit in their initial encounter when she is hit by Art's car. With skilled acumen the injured Linda manages to strike a deal with Art wherein they both profit economically from his inevitable insurance settlement. Although Art expresses significant reservations about the plan she is hatching, she replies: "You're an honest man. I understand Art. Art. Art, I understand. But what has your insurer done for you, lately?" (22). The implication here is that Art's resistance to this scheme is due to his honesty; Linda isn't hampered by the same character trait. Her moral flexibility reaches its pinnacle when she eventually betrays Art by helping steal and market his MassPike network for her own gain.

Unlike Linda's position, Fede is not so much in opposition to Art as in contradiction with him and his Tribal loyalty.[4] Fede initially appears to be a loyal Tribalist; after all, he "practically invented Tribal agent-provocateurs" and has been "working for McKinsey, systematically undermining their GMT-based clients with plausibly terrible advice, creating Achilles' heels that their East Coast competitors could exploit" (52). It isn't until Art reveals his revolutionary MassPike network that a different picture of Fede emerges. To Fede, Tribalism has become "just a game. When it comes down to your personal welfare, you can't depend on time zones. This is more job than calling, you know" (123). Fede's view regarding loyalty is even more disturbing:

> "Loyalty! If you're doing all of this out of loyalty, then why are you drawing a paycheck? Look, I'd rather that this go to Jersey. They're basically decent sorts, and I've drawn a lot of pay from them over the years, but they haven't paid for this. They wouldn't give us a free ride, so why should we give them one? All I'm saying is, we can offer this to Jersey, of course, but they have to bid for it in a competitive marketplace. I don't want to gouge them, just collect a fair market price for our goods."
>
> "You're saying you don't feel any fundamental loyalty to anything, Fede?"
> "That's what I'm saying." (123)

Art does manage to debate Fede into a corner wherein Fede vows to remain loyal to Art. Of course Fede is lying and he ends up selling out his friend by becoming part of the triumvirate that includes Linda and Linda's ex-boyfriend Toby. Fede has effectively abandoned his Tribal politics in favour of a corporate sensibility that is based on selling the network for the biggest market share available, a share that includes the betrayal of his former friend. Finally, the triumvirate reveals its underlying motivation in its new business venture: TunePay, Inc. As the federally incorporated company name makes clear, the price for file-sharing is of paramount interest.

Where Fede and Art emerge in the novel in a position of contradiction, Fede and Linda complement one another on an emotional level: Fede is also emotionally volatile. His first introduction is during an outburst, a paranoid rant that his and Art's status as agent-provocateurs has been discovered. Although Art is able to calm him down, Fede "had been with McKinsey for most of his adult life, and he was superparanoid about being exposed and disgraced in their ranks" (53). Later, Fede is extremely upset that Art has not kept him apprised of his hour-by-hour activities: "Art, you haven't been to the office for more than four hours in a week. It's going on noon, and you still aren't here.' Fede's voice is hot and unreasoning." Art hits the nail on the head when he angrily replies "So fucking *what*, Fede? I don't actually work for you, you know" (83). It becomes clear, however, that Fede believes Art *does* work for him, betraying the entire idea of the communal Tribes. When Art announces he plans on taking the day off Fede exclaims: "You can't just 'take the day off.' I *wrote* the goddamned procedure. You have to fill in the form and get it signed by your supervisor. It needs to be *documented*. Are you *trying* to undermine me?" (84). Fede echoes the corporate machine in his insistence on paperwork, documentation, and appropriate procedure. Thus, even before the MassPike betrayal takes place the clues are scattered in the narrative that Fede's Tribal sensibility has been corrupted by the same type of bureaucratized hierarchy that drives the end-user hostility of corporate culture. The two overly-emotional characters in the novel complement one another (without being identical) and conspire against Art while Art, the only mentally stable figure of the bunch, has his mental health perpetually questioned, probed, and doubted by those running the sanatorium.

Somatic Networks and Molecular Hacking

Art's Tribal activities as an agent-provocateur are obviously Doctorow's satirical critique of a wired marketplace that regularly has the end-user tied to the whims of a hostile corporate culture. Admittedly, Art is initially part of the end-user problem because his loyalty to the ESTribe requires his work at V/DT to be founded on maximizing end-user hostility. It is not until he is in the sanatorium that he has an epiphany that his life has been wasted. After roof-Art has been hurt while trying to escape off the roof, he is introduced to Dr. Szandor, a medical doctor who stands diametrically opposed to the sanatorium's psychiatrists. Unlike the mental-health practitioners who have repeatedly ignored Art's claims of wrongful incarceration and have opted to put him on medications that leave him in a drugged stupor, Dr. Szandor actually talks to Art and learns a great deal about the man. A key topic of discussion is the problems with mental-health facilities. During those discussions Art begins to sketch out potential alternatives to the sanatorium system that has him caged, a theoretical facility he

dubs HumanCare. Dr. Szandor is noticeably impressed with Art's acute vision of HumanCare while Art feels "a familiar swelling of pride. I like it when people understand how good I am at my job. Working at V/DT was hard on my ego: after all, my job there was to do a perfectly rotten job, to design the worst user experiences that plausibility would allow. God, did I really do that for two whole goddamned years?" (179). Art comes to recognize that the last two years of his life at V/DT have been a waste because his agent-provocateur mission, founded on end-user hostility and corporate stagnation, has stifled what amounts to his innate skills as a molecular hacker.

While Art is not a computer hacker he does possess a hacker ethic. In *Hackers: Heroes of the Computer Revolution*, Steven Levy charts the history of computer hackerdom and identifies a distinct separation between the early stages of computer hacking and the more contemporary popular images of hackers as cyber-vandals or invasive cyber-criminals. The first wave of hackers, circa late-1950s and centred around MIT's Research Laboratory of Electronics, was interested in exploring the possibilities of a then-emerging computer market. As Levy explains, the imaginative possibilities of what the earliest computers heralded drove these hackers to experiment with computers in ways that went beyond their original programming. A hacker ethic eventually emerged that was based on decentralized and unrestricted access to information: "Just as information should be clearly and elegantly transported within a computer, and just as software should be freely disseminated, hackers believed people should be allowed access to files or tools which might promote the hacker quest to find out and improve the way the world works" (Levy 102). The second wave of hackers emerged during the late-1960s and 1970s and took that early hacker ethic outside the hallowed halls of MIT and other academic institutions. Computer clubs such as Homebrew emerged that enabled early computer enthusiasts to form techno-communities based on hacking as "the act of understanding, exploring, and changing the systems themselves—the act of creation, the benevolent exercise of power in the logical, unambiguous world of computers, where truth, openness, and democracy existed in a form purer than one could find anywhere else" (Levy 192).

Like the first and second waves of hackers, Art is drawn to *understanding* and *creation*. This is made evident in the very beginning of the novel. Art's earliest memory is of a dream wherein his three-year-old dream self is in a doctor's waiting room. The only object in the room is an empty cylinder that once held toy blocks. Surrounding the cylinder is a "trio of older children, infinitely fascinating. They confer briefly, then do *something* to the cylinder, and it unravels, extruding into the third dimension, turning into a stack of blocks" (13-14). This *something* and the subsequent transformation of the cylinder into a stack of (building) blocks define Art's hacker sensibility. The narrative repeatedly demonstrates his desire to break objects down into their constitutive parts and

then re-assemble them in new ways. For example, when Fede gives Art a 200,000 year old stone axe as an apology for an earlier argument (well before the betrayal) it is in a gift bag that Art is unable to open. He "felt for the catch that would open the bag without tearing the materials, couldn't find it immediately, and reflexively fired up his comm and started to make notes on how a revised version of the bag could provide visual cues showing how to open it" (86). Like the first and second wave hackers that predate him—hackers that saw the end-product hardware or software and then took it to the next level by modifying its basic operational function—Art carries on a similar function when he intuitively breaks the bag down into its rather simplistic constitutive parts and, thinking outside the box (or the bag), begins mentally re-assembling it into a more user-friendly design.

The MassPike music system Art envisions is the apotheosis of his hacker sensibility wherein an established system is broken down into its constitutive elements and then re-assembled into a new user-friendly network that distributes art to a wide audience and generates legitimate revenue without negatively affecting user-experience. Art's MassPike technologicity is *peeracy*, a network grown out of the emergent possibilities of the MassPike technological medium as opposed to a top-down corporate model imposed by the same rulebook-following V/DT peer-review group Doctorow has earlier satirized; in other words, this is the "molecular" of molecular hacking. As I've argued elsewhere,[5] the interactions among cutting-edge technologies and the notions of "molecular" and "molar" are explored in Pierre Lévy's *Collective Intelligence: Mankind's Emerging World in Cyberspace*. Lévy differentiates between the two: "In contrast to *molar* technologies, which manage objects in bulk, in the mass, blindly, and entropically, *molecular* technology will manage the objects and processes it controls on a much finer level of detail. It will avoid mass production" (40-42). In a similar manner to Sherryl Vint's summary of Deleuze and Guattari's molar and molecular identities, molar technologies and molar networks—molar technologicity—might be thought of as "fixed in being, able to be grasped as a whole, recognized within the current social formation" whereas molecular technologicity can be envisioned as "always in flux" and "made up of capacities and tendencies [that] offer the possibility for transforming identity and society precisely because [it refuses] to follow fixed channels" (Vint 287). Molar technologicity is also typically hostile to somatic forms of information processing. As Lévy explains, somatic technologies "imply the effective presence, commitment, energy, and sensibility of the body for the production of signs." Consequently, a somatic message "is never exactly reproduced [. . .and] the producer of a somatic message modulates, adapts, and continuously varies the flux of signs of which he is the source" (46). In other words, molar technologicity with its top-down hierarchization and distribution of information is hostile to somatic networks that are based on adaptation,

flux, and the input of the individual body. Molar technologicity takes minimal stock of the physical/somatic body when it comes to information; rather, the information pattern is rigidly fixed, divorced from the interpreter and any agency s/he brings to the decoding and processing of content and signs. On the other hand, molecular technologicity—an approach grounded in digitization wherein we are able "to create, modify, and even interact with messages, atom of information by atom of information, bit by bit" (Lévy 48)—has an affinity with somatic networks because it offers new ways of re-establishing "sensibility within the context of somatic technologies while preserving the media's power of recording and distribution" (Lévy 49).

While the end-users in *Eastern Standard Tribe* may not digitalize the music they are downloading, Art's vision is of a molecular somatic network wherein users on the MassPike are commu(n/t)ing with one another and building their own personalized playlists as opposed to passively accepting the music streaming in through their consoles from centralized/molar stations. They are somatically involved in the music experience as part of a broader community; thus, their playlists are not "fixed in being" but are "always in flux" and "refuse to follow fixed channels."[6] The users become part of the process and enable audio-based information patterns to take on multiple manifestations, much like Doctorow's *Eastern Standard Tribe* has multiple material instantiations—print-based, online, Java applet—enabled by modifications of the informational pattern by its recipients: the fans. Art's vision of the MassPike—the molecular network of *peeracy* and legal war-driving—is a synthesis of his hacker ethic, one of understanding and creation, and his molecular sensibility. It is for this reason the betrayal by Linda and Fede is so hurtful and his response so violent; they have stolen a part of *him* and marketed it to a molar corporate culture.

The HumanCare facility that Art and Dr. Szandor create is another opportunity for Art to put molecular hacking into practice. Art is able to break the sanatorium down to its constitutive elements and reconstitute its building blocks to create a new facility founded on peer interaction synergistically fused with mental health care. Art imagines a medical technologicity that gives

the patients a good reason to wear their tracking bracelets: redesign them so they gather stats on mobility and vitals and track them against your meds and other therapies. Create a dating service that automatically links patients who respond similarly to therapies so they can compare notes. Ooh, by comparing with location data from other trackers, you could get stats on which therapies make people more sociable, just by counting the frequency with which patients stop and spend time in proximity to other patients. It'd give you empirical data with which you track your own progress. (178-79)

HumanCare is founded upon "smart doors, public drug-prescription stats, locator bracelets that let 'clients' [. . .] discover other clients with similar treatment regimens on the ward, bells and whistles galore" (219). This is quite different from the bureaucratic red tape of the sanatorium, a molar institution. For example, group therapy in the sanatorium is an exercise in futility because it becomes clear nobody is actually listening to Art; in addition, he is force-fed medication that dulls his ability to argue his case for sanity, thereby providing the medical establishment the leverage to commit Art for further psychiatric observation. When Art asks to see the evaluation protocol so he may do some research prior to his competency hearing he is told "we don't provide access to medical texts to our patients" (103). During the hearing he is represented by an ineffective lawyer he meets fifteen minutes prior to the courtroom hearing and he is too fuzzy because of the drugs to adequately represent himself to a judge that spends the bulk of the proceedings tapping on her comm unit. The molar-minded sanatorium and medical establishment are based on medical snobbery, patient victimization, the suspension of civil rights, and staid inflexibility. In its blind and entropic management of patients en masse it is founded on peer isolation. HumanCare, however, is based on a flexibility that allows patients to communicate with one another, a public accountability regarding drug treatment plans, and an overall transparency to highlight the links among patient, physician, and the general public. HumanCare embodies the same peer sensibility that sparked Art's music-sharing service, one based on reducing end-user (read: patient) hostility and facilitating peer interaction.

While Art did lose his MassPike molecular network to the triumvirate, his incarceration allows him to foster a relationship with Dr. Szandor that provides him with a focus that his role as an agent-provocateur denied him, a focus that gives birth to HumanCare. Interestingly, Dr. Szandor contradicts Linda in significant ways. Where Linda manipulates her budding relationship with Art to suit her own interests— the car accident and subsequent financial settlement; the emotional temper tantrums; the emergence of TunePay, Inc.— Dr. Szandor's budding relationship is based on genuine medical concern. Dr. Szandor forms a doctor-patient bond of confidentiality—one founded on intimacy—and begins to care about Art's physical and emotional well-being. Unlike Linda and Fede's hijacking of Art's music-sharing service, Dr. Szandor collaborates with Art on HumanCare. He enters into a partnership with Art, even risking his medical licence to ensure Art can be freed from the Boston sanatorium. Dr. Szandor, however, is no mirror-image to Art. He has no initial Tribal affiliations, he is no agent-provocateur, and he does not base his life around circadian rhythms. Yet he complements Art because he has medical affiliations, is an agent of health-care, and bases his life around medical bodily rhythms. Like Art he too has devoted his loyalty to a wider community: the medical community. This complementarity reaches its climax at the end of the

novel when we learn that Dr. Szandor has "been holed up in his rooms, chatting away on the EST channels" (220). Together, both Art and Dr. Szandor can take the loyalties fostered by a media(ted) community and apply them to the betterment of the human subject.

In sum, the Tor-version of *Eastern Standard Tribe* is a synecdoche for Doctorow's own career. Just as Art's HumanCare project and MassPike system emerge from new technologicities, so too does *Eastern Standard Tribe* emerge out of Doctorow's hacker ethic and technologicity. The novel is about media(t)ed affiliations, somatic networking, and the value of molecular sensibilities, issues Doctorow has addressed in the multiple facets of his professional career. And, much like Art's relationship to end-user hostility, peer networking, and a new technologicity, Doctorow's use of peer networking and Creative Commons licensing allows *Eastern Standard Tribe* (and his other fictions) to emerge from the cacophony of contemporary technoculture. In the end, *Eastern Standard Tribe* is a "futre-present" novel *depicting*the possibilities invested in molecular mediation as well as a novel *emerging* from molecular new media. As a native of the cyberworld, Cory Doctorow and *Eastern Standard Tribe*—its narrative focus; its production; its distribution—represent new ways of thinking about technologicity and, in the words of Bruce Sterling, "[w]e should all hope and trust that our culture has the guts and moxie to follow this guy. He's got a lot to tell us."

Notes

1. The "Tor-version" of *Eastern Standard Tribe* is an attempt to separate the novel-as-print from other material forms that engender different reading practices and interpretative codes. As N. Katherine Hayles writes, the "transformation of a print document into an electronic text [is] a form of translation—'media translation'—which is inevitably also an act of interpretation" (89). The problem of even defining "text" in the age of media translation highlights what Hayles calls the Work as Assemblage (WaA):

   > Rather than being bound into the straitjacket of a work possessing an immaterial essence that textual criticism strives to identify and stabilize, the WaA derives its energy from its ability to mutate and transform as it grows and shrinks, converges and disperses according to the desires of the loosely formed collectives that create it. Moving fluidly among and across media, its components take forms distinctive to the media in which they flourish, so the specificities of media are essential to understanding its morphing configurations. (106-07)

   In other words, the WaA of *Eastern Standard Tribe* published in print by Tor is not the same *Eastern Standard Tribe* available for download; rather, the content might

be identical but the reading practices of the print medium and the online medium effectively (re)deploy the online version of *Eastern Standard Tribe* as a different text than the Tor-version. As critical work develops and matures in its consideration of media translation and the Work as Assemblage, it seems likely Doctorow will emerge as a central figure of critical consideration.

2. The "post-genre science fiction" designation is taken from Veronica Hollinger's 2004 conference paper "Post-Genre Science Fiction: Atwood and Gibson." She argues that William Gibson's *Pattern Recognition*, a novel whose science fictionality "is open to debate," is certainly a text that "could not have been written *without* science fiction" and one that inhabits a "present that we tend to describe as 'science fiction.'" Building on the work of such figures as Frederic Jameson and Istvan Csicsery-Ronay, Jr., Hollinger identifies Gibson's novel as symptomatic of a change in science fiction: "The rate of technological transformation continues to increase incrementally and the *fact of change* becomes the defining feature of the present. Science fiction's 'mission statement'—that *the future will be different from the present*—now seems redundant: today, *the present is different from the present*." This is best exemplified in *Pattern Recognition* when Hubertus Bigend tells Cayce Pollard that

> we have no idea, now, of who or what the inhabitants of our future might be. In that sense, we have no future. Not in the sense that our grandparents had a future, or thought they did. Fully imagined cultural futures were the luxury of another day, one in which 'now' was of some greater duration. For us, of course, things can change so abruptly, so violently, so profoundly, that futures like our grandparents' have insufficient 'now' to stand on. We have no future because our present is too volatile[. . .]. We have only risk management. The spinning of the given moment's scenarios. Pattern recognition. (57).

John Clute also addresses this "post-genre" terrain of temporal risk management when he reviews *Pattern Recognition* and writes that "SF is no longer about the future as such, because 'we have no future' that we can do thought experiments about, only futures, which bleed all over the page, soaking the present." Clute goes on to claim that "SF stories can no longer fruitfully be defined as texts which extrapolate particular outcomes from particular 'nows'; such stories that are published as SF are, in fact, nostalgia blankets: Instant Collectibles. In 2003, on the other hand, any story about the case of the world, any story the world can be seen through, is in fact SF." In this sense, the recent "future-perfect" label Hollinger applies to *Pattern Recognition* (in "Stories About the Future: From Patterns of Expectation to Pattern Recognition") feels appropriate. The future-present designates a condition marked by an "implosion of science fiction and science fact" and although science fiction is the literature of change, "change is exactly what now defines the present. It no longer guarantees the future as the site of meaningful difference" (Hollinger, "Stories" 453).

The "future" of "post-genre science fiction" or "future-present" remains to be seen; however, I contend that *Eastern Standard Tribe* is also a candidate for these nascent "post-genre" or "future-present" labels. As evidenced in his multi-faceted career, Doctorow is plugged into a world graspable solely through the *fact of change*. As the *Vancouver Sun* rightly argues, "(l)ike William Gibson and Bruce Sterling,

Doctorow has discovered that the present world is science fiction, if you look at it from the right angle." Doctorow even goes so far as to attribute his science fictional outlook to his Canadian ties:

> Canadianness is a science-fiction-ness. Being a Canadian is inherently futuristic. We aren't fantastic at light-speed innovations [. . .] but we are bombarded by and must assimilate the rampant "progress" from south of the border. We are the street, finding its own uses for things [. . . and so] long as America is thrashing on the end of the hook of the future, Canada will be reflecting the future back to you and showing you the changes that are both obvious to us and invisible to you. ("Canada" 44)

Much like Hollinger's depiction of *Pattern Recognition*, one might consider *Eastern Standard Tribe*, a novel more realism than science fiction, as eligible for "post-genre" or "future-present" consideration because it too is a novel that "could not have been written *without* science fiction" (Hollinger, "Post-Genre").

3. In an interesting complication, roof-Art refers to flashback-Art as a separate person, even switching from the 1st person narrative voice to a 3rd person narrative voice. In addition, the first two paragraphs of Chapter Three feature the ghost of a nameless narrator who sets the stage for roof-Art to begin telling his story that will then include flashback-Art. This narrator says "[i]t's not easy being Art's friend" and then explains that "[i]n order to preserve the narrative integrity, Art ('not his real name') may take some liberties with the truth. This is autobiographical fiction, after all, not an autobiography." In the very next paragraph, roof-Art takes over: "Call me Art ('not my real name.')" (16). Roof-Art explains that the events of flashback-Art constitute a morality play whose central theme is: "Would you rather be smart or happy?" (12). From the outset Doctorow appears to be highlighting the very function of (a/A)rt, how one relates to (a/A)rt, the uncertainty invested in (a/A)rt, and what we readers— ones that are explicitly evoked as reading the novel itself—take from (a/A)rt.

4. My discussion of characterization in Eastern Standard Tribe is inspired in part by A. J. Greimas's semiotic square as well as a series of poolside conversations at the 2006 International Conference on the Fantastic in the Arts.

5. See "Post/Humanity and the Interstitial: A Glorification of Possibility in Gibson's Bridge Sequence." *Science Fiction Studies* 30.1 (March 2003): 72-90.

6. In his discussion of "molar" and "molecular" Pierre Lévy references the work of Gilles Deleuze and Félix Guattari, notably the original French version of *A Thousand Plateaus: Capitalism and Schizophrenia*. In that work Deleuze and Guattari make it clear that "molar" and "molecular" are not antithetical states but, rather, complementary ones working in tandem in an inseparable relationship. For example, they write that "molar" and "molecular" "do not have the same terms or the same relations for the same nature or even the same type of multiplicity. If they are inseparable, it is because they coexist and cross over into each other [. . .]. In short, everything is political, but every politics is simultaneously a *macropolitics* and a *micropolitics*" (213; emphasis in original). They later make it clear that "although it is true that the molecular works in detail and operates in small groups, this does not mean that it is any less coextensive with the entire social field than molar organization. Finally, the qualitative difference between the two lines does not

preclude their boosting or cutting into each other; there is always a proportional relation between the two, directly or inversely proportional" (215). In other words, molecular is not synonymous with "small-scale" operations (e.g., the "indie" label) nor is molar necessarily synonymous with "large-scale" operations (e.g., multinational conglomerates). It is this molar/molecular co-extensiveness that allows Art to think in a molecular manner while operating on a vast molar-level scale—Virgin Deutsche Telekom—when it comes to his music-sharing service and then his HumanCare facility or, at the opposite end, the deviousness of the small-scale molecular triumvirate who betray Art as a consequence of a molar sensibility.

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