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WORKER BLOWBACK

User-Generated, Worker-Generated
and Producer-Generated Content within
Collapsing Production Workflows

The television industry talks out of both sides of its mouth. Especially about user-generated content (UGC), which it habitually conflates with piracy. The production trade *Television Week* shamelessly offered the following antithetical statements in the same issue. One article sounded the alarm: "Sending a cease-and-desist order (to an illegal downloader) is like sending a letter to a Colombian drug lord," and, "Who will step up to disband TV's pirates?"[1] At the same time, an accompanying column solicited the very same industry readers to the trade's tvweek.com Web site by boasting, "*Television Week* is trawling video web-sites to find the hottest clips spreading on the Internet,"[2] even as it bragged and marveled that "This [CNBC] clip is everywhere. It has appeared on YouTube, Metacafe, Break, and various blogs. . . . By August 8 the video had been viewed more than 973,002 times on YouTube."[3] Shocked that many of the network TV pilots previewed at the recent spring up-fronts had already spread uncontrollably across the Internet long before their fall broadcast premieres, the trade's obviously conflicted editorial posture failed to confirm a more likely scenario. As I argue in this chapter, this kind of unauthorized "piracy" is precisely the kind of activity that studios and networks now intentionally generate if buzz-needy new

shows are to have any chance of being "found" and circulated by viewers in the vast multichannel, multiplatform clutter. Studio and network lawyers now obsessively guard proprietary screen content through threats and lawsuits, while their very own marketing departments down the hall bulk-load and hand out their proprietary screen content as promotional fodder and fan bait across the Internet. Official stance: control. Unofficial practice: a sanctioned but disavowed content-fragment free-for-all.[4]

As industry ostensibly loses control of its proprietary content in a world producers optimistically hype as providing viewers with access to any content, any time, any place, it has also had to adopt, hijack, mimic, ape, or internalize the very unruly behaviors of its audiences as a model not merely for consumers, but for its own workforce in production as well. Scholars tend to focus far more on the new volatilities of digital media consumption rather than on the no less volatile convulsions unfolding now in digital media production spaces. I would argue that these warring volatilities are in fact two complementary sides of the same coin. This chapter addresses some of the odd reversals and contradictions that now characterize the television industry as it tangles with and obsesses upon UGC in its attempt to discipline and monetize each rapidly appearing digital media platform. Among other things, such a study suggests that ostensible media piracy is actually a very lucrative form of commercial viral marketing; that UGC regularly transforms the unruly crowd into producer-generated users (PGU); and that the do-it-yourself (DIY) outsider ethos now serves not as alternative media but as a valuable form of mainstream workforce "bootstrapping" and outsourcing.

Why think about digital television through the lens of production labor's complex interactions with audiences? Prominent new media theories tend to follow a binary model of media and culture. These frameworks are alternately tech-centric (Negroponte), fan- and user-centric (Jenkins), interface- and software-centric (Manovich), or industry- and economy-centric (Schiller).[5] All provide convincing and influential accounts of digital media phenomena, yet they also tend to downplay or look beyond one essential category in the new media equation: production labor. Spending any time with contemporary television production workers quickly shows how inadequate the old categories are that cleanly separate producers and media workers from audiences and consumers. Various accounts examine how fans and digital media users appropriate the means of production and so function as producers. But

fewer have discussed how production workers themselves are aware of their simultaneous roles as audience members and online users. In fact, in interviews and ethnographic research, practitioners regularly invoke their experiences (or those of family members) as audiences and fans in explaining how and why new television forms, genres, and technologies function as they do. And these audience functions and competencies constantly inform decisions and practices on production soundstages and post-production suites. Audiences and fans may increasingly act as producers, but producers are always audiences and fans as well. Shifting focus to digital workers makes some sense since they now function as an emblematic nexus point between industry, consumers, and technologies. As such, they facilitate, enable, implement, and broker emerging digital cultures.

In this chapter I would like to think through four related phenomena: first, the very recent ways that media corporations have worked to import, mimic, rationalize, and commercialize ostensibly unruly UGC; second, the ways that online pre- or proto-UGC practices in the early 2000s (that is, before YouTube/MySpace) disrupted top-down "producer/studio tracking" and long-standing public relations "control" schemes; third, the ways that new digital technologies have disrupted carefully maintained labor relations by collapsing workflow hierarchies on the production side; and finally, the ways that production workers have embraced the supposedly unruly practices of viral video and social networking to negotiate rapid changes in production technology, industry economics, and underemployment. Considering the digitization of television through these four perspectives makes it clear that a range of "unauthorized" activities, or what I would term online worker-generated content (WGC), plays as formative a role in how producers and executives negotiate digitization as does the UGC that garners the lion's share of the headlines.

AMATEURIZED/PROFESSIONALIZED/COMMERCIALIZED UGC: WORKFORCE CHANGES

UGC has not simply disrupted television's onscreen content. It has also profoundly impacted production labor. Among other things, UGC has pushed media companies to master crowdsourcing in attempts to harness new online users to collectively generate marketing or productions proper for film and video companies. Crowdsourcing updates and displaces the far darker term outsourcing, a practice that helped U.S. film

and television companies to weather difficult economic conditions in the 1980s and 1990s by laying off "inside" employees and sending production work outside of the studios and networks where it could be produced much more cheaply. A benign and utopian term, crowdsourcing represents in some ways the ultimate form of outsourcing since the new crowds that collectively make media content today (1) regularly "work" for free; (2) have no employee entitlements or benefits; and (3) are disorganized and so incapable of invoking labor law protections.

Broadcasters and production studios were quick to latch onto and exploit UGC. The trades and show-biz reports marveled at the speed with which mega-conglomerate News Corporation took over MySpace and Google took over YouTube in 2006, even as all scratched their heads trying to figure out how these massive "amateur" sites would make their corporate masters money.[6] Harnessing the uncontrollable hive of vast online user bases proved difficult, and many cynics argued that these top-down partnerships were less about interacting with the people than about stealthy consumer surveillance and data mining. Yet a range of more public initiatives showed that some affirmation of online production would probably always accompany the corporate viral marketing opportunities that UGC sites afforded. The 24/7 cable news channels, like MSNBC, made coverage of the online blogosphere a regular part of their programming in 2006. Advertisers solicited the best in amateur online videos in contests that guaranteed to broadcast the winners during television's high holiday, the Super Bowl, in 2006 and 2007. Reality cable networks like the Discovery Channel actively solicited viewer-produced videos and parodies and featured them as mock Discovery Channel programming in 2007. Many network programming departments harvested and aggregated UGC videos to create prime-time series like ABC's *i-Caught* in 2007 (see figure 1).

A full list of ways that conventional networks have used UGC is extensive and beyond the scope of this chapter. I am less interested in a comprehensive description of such direct acquisitions of UGC by dominant media than in how UGC practices have transformed the corporate and labor practices of dominant media's production cultures. Hollywood and network television's traditional standby defense mechanism, used to reestablish cultural or programming superiority when faced with alternative modes of production, has always been to simply buy out whatever alternative or "resistant" programming emerges outside of their bound-

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FIGURE 1 ABC's "i-Caught" Web page solicits and showcases UGC as the series' primary onscreen broadcast content in prime time in 2007–2008.

aries.[7] Yet merely and unimaginatively sticking YouTube videos into part of a programming day proved to be less lucrative with broadcasters or popular with audiences than the networks may have hoped. I would argue that a far more fundamental shift was unfolding in the ways that production companies and production workers themselves generated content in the shadow of pop culture's new fascination with UGC.

Many networks, including NBC and ABC, created online sites that solicited and featured YouTube-like uploaded videos from amateur fans of the networks. Yet these showcases represented little more than lip service on the part of the networks. In the fall of the 2006–2007 programming season, both NBC and ABC began to allow online users to download current prime-time programming immediately after series like *Heroes*, *30 Rock*, *Ugly Betty*, and *Desperate Housewives* aired. This created shockwaves in the production community since many of the labor sectors were owed "residuals" from ancillary distribution of shows on which they'd worked and were not being paid as the networks "gave their shows away" for "free." NBC and ABC eventually negotiated with the guilds on the issue of residuals, but their bigger accomplishment was to figure out ways to format prime-time shows in downloadable form with advertising inserted. If pages for uploading UGC did little to promote existing network brands, then chopping up and reformatting branded series to UGC scale proved somewhat more effective.

The unpretentious air and populism of "amateurism" was part of the original draw of UGC, but amateurism turned out to be a difficult beast

to tame and monetize. Increasingly, the vast, horizontal, democratic cultural soup of Web-based video proved unwieldy, and media companies slowly began to professionalize the UGC enterprise. The net effect was to bring more control of UGC inside of the conglomerate. Yahoo, the number two Web search company, launched Yahoo Video to compete head on with YouTube by primarily featuring user-generated video in 2006. Yet by August 2007, Yahoo Video was ranked only the fourth most visited video site on the Internet by Nielsen NetRatings (behind YouTube, Google Video, and AOL Video). This less-than-impressive result led to the replacement of CEO Terry Semel with Yahoo co-founder Jerry Yang.[8] After the executive coup, Yahoo hyped its revamped approach to the press online as the creation of a "one-stop video portal." This newly visible and more user-friendly status would be achieved by no longer "silo-ing" videos into discrete, controlled categories. Yahoo thus eliminated preexisting categories that the corporation had originally imposed under the Semel regime. This was done not solely in order to allow users to more easily search for videos across borders but, more important, to allow "marketers . . . to buy access to a demographic across Yahoo and all its video content."[9] As this important example suggests, advertisers and market research—not online user-generated activity alone—drive dominant media's current push to access and open up the Web to free-wheeling video-centric usage.

The chief casualty in all of this is the amateur UGC that gave Yahoo Video at least some buzz in the first place. The company's new centralized approach may spur increased video viewing, but now only of videos made by higher-quality amateurs or "prosumers" or aspiring professional video makers. In place of the relative anarchy of amateur uploading, therefore, Yahoo now culls and discards the video dregs and semi-professionalizes UGC by putting online, as Yahoo's general manager for video states, "community elements (for UGC producers) like email and JumpCut," Yahoo's online editing software.[10] Advertisers are now wary of UGC's unruliness because, as Yahoo's director of video strategy Rebecca Paoletti asserts, UGC "content can be risqué and uneven in quality." Paoletti's more disciplined approach to sponsoring UGC is a contest inviting users to produce trailers for the summer movie blockbuster *Transformers* and a competition for user-generated Doritos commercials for the Super Bowl. "Advertisers are more comfortable sponsoring that type of content," explained Paoletti, underscoring the gradual but ostensibly

necessary industrial "disciplining" of UGC.[11] Is your company unable to control the growing online chaos? Solution: provide semi-professional editing software and economic incentives to glean only the "quality" UGC (only new media that look like old media) since Madison Avenue knows well how to tolerate and monetize old media content.

If Yahoo now corrals and semi-professionalizes only "quality" UGC makers, Sony Pictures Entertainment movie and television studio goes further by explicitly professionalizing and industrializing UGC producers. Like Yahoo, News Corporation, and Google, Sony's knee-jerk corporate reaction to UGC in 2006 was mostly to buy a hot bit of UGC real estate named Grouper and to incorporate it into the conglomerate. A year later, however, Sony, like Yahoo, unceremoniously dumped its populist concept of an open video-sharing site and the amateurs that came with it. Putting the best spin possible on the final stage of the corporate sellout and the reinvention of Grouper as Crackle.com, Grouper founder and now Sony executive Josh Felser triumphantly announced to the industry, "We're out of the user-generated video business and in the emerging-talent business." Van Baker, research vice president at technology research company Gartner, justified Sony's housecleaning and what he termed its new "studio-centric" approach (providing funding, promotion, and syndication to outsiders) by saying, "There is so much video on the Internet now that it's *crying out* for a step up in quality. That's just media companies doing what they do best, which is finding and distributing good content."[12] Critics might instead call this benign pose a traditional hostile takeover of UGC camouflaged in the trade press by corporate doublespeak.

Sony now makes cash payments and disingenuous promises to those it woos — UGC makers and desperate outsiders — that a Sony partnership brings potential for Oscar consideration(!). These corporate gambits by Sony overshadow Yahoo's largely symbolic professionalizing incentives. Crackle.com's quarterly UGC competitions in three broad categories — animation, short form, and comedy — involve cash prizes, trips to Los Angeles, and meetings and pitch sessions with studio executives at Sony Pictures Animation, Sony Pictures Television, or Sony/Crackle's Improv Comedy Lab. Clearly, what started as the ad hoc, ground-up populist media making of UGC has been transformed into something Hollywood has mechanically mastered for a century: talent scouting and central casting. But Sony is far from alone in this transformation of UGC into

commercial demo reels, spec concept treatments, and studio talent pipe-lines. Viacom solicited UGC short-form videos for its Test Pilots category on the Atom Films Web site (which MTV acquired in 2006), and the top submissions were then culled for airing on MTV's Comedy Central cable series *Web Shows*. In its pursuit of the lucrative male 18–34 demo-graphic, Lions Gate Entertainment studio also systematically scouts for "edgy talent" to hire in the massive pool of amateur and gross-out videos online. Following this move, the studio bought a share in online video company Break.com in July 2007 to better compete with the UGC giant YouTube.

The UGC syndication overhauls described above—where Sony, MTV, and Lions Gate have mastered and mainstreamed outsider practices—are based on long-standing studio hubris about media's minor leagues, that "We know better than anyone else how to distribute." Such a stance completely ignores the true lessons of YouTube: that nonlinear, net-worked sharing, through a vast "rhizomatic" network of online users (a cybernetic metaphor) can generate popularity on par with any linear, locked-down studio content pipeline (an odd, rigid, nineteenth-century industrial metaphor). Yet the studio's new pipeline (distribution) meta-phor for UGC increasingly rules in Los Angeles media companies. This is because the Hollywood mode of production/distribution is deemed a less risky, long-trusted, and known quantity, something far easier to in-dustrially rationalize than the amorphous, unpredictable user-sharing networks of YouTube. DreamWorks's reality series *On the Lot*, broadcast on Fox in the summer of 2007, is a good example of how the UGC ethos has been gleaned and wrested from the digital hinterlands in largely symbolic rather than actual terms. Chosen from twelve thousand on-line submissions, eighteen young, untrained wannabes were flown to Los Angeles to make films and fight out over who is the best filmmaker. After many weeks of competition and elimination, on the culminating night of the series, August 21, 2007, a single finalist was chosen as a win-ner in the competition and given a "one million dollar development deal with DreamWorks." The final shot of the series showed the once UGC amateur—now anointed "winner"—walking side by side with his Medi-ci-like patron and mogul Steven Spielberg through the pearly gates and into DreamWorks Studio.[13] As the camera craned, music swelled, and end credits rolled up, the Darwinian lesson to America was clear—that meritocracy and distinction drive industry's calculated method of natu-

ral selection. Only the best and luckiest, a statistical rarity, arise from the
UGC dregs to begin a "real career" in film. What was lost in all of Fox's
and DreamWorks's televisual celebratory showcase of bootstrap film-
making populism was the fact that absolutely none of the production re-
sources used for the scores of short films produced throughout the *On
the Lot* summer were either amateur- or user-generated. In effect, like
alien lottery winners, the show's earnest and awestruck aspirants were
airlifted to Hollywood and given fully professional crews, onscreen tal-
ent, and production technologies to work on their amateur films. Tele-
vision's how-to-make-it showcases like these, therefore, are DIY and UGC
in pretense only. The newly discovered finalists here turned out to be
largely replaceable cogs in a very well-oiled production machine—a ma-
chine that could make "quality" films regardless of the lucky monkeys
the studio put at their typewriters to generate content.

The examples thus far paint a fairly dark, totalizing picture of the
managerial powers of old media and producer-generated content (PGC)
to discipline and channel normally unruly UGC into long-standing pro-
duction, marketing, and syndication models. Yet the unsettling of work-
flow and production hierarchies, due to digitization, has also opened
up room for more agency by professional workers. Pixel Corps, for ex-
ample, self-identifies as a collective "guild for online creators around the
world." Says the guild founder, "People . . . say, 'Can you produce the
content?' We are just hired guns. We show up. We shoot. We are like
a coalition of producers for hire."[14] The term guild evokes high-level
craft associations (like the Directors Guild of America [DGA] and WGA)
with medieval roots. Pixel Corps promotes commerce for its member-
ship but constantly slides back and forth between its nonprofit charter
and its for-profit productions. In doing so, the group voluntarily par-
ticipates (as workers) in the same wave of user professionalization de-
scribed above that studios and networks pursue from the corporate side.
The online guild's publicity demands that its members—once only un-
paid aspirants—now be addressed and respected as commercialized pro-
fessionals. This organizing push by UGC makers to professionalize has
been triggered in part because online creators have increasingly realized
that many other media entities have made a financial killing off of their
efforts. Stated one miffed blogger advocating for an official labor union
for UGC-ers, "It would raise the professionalism. Maybe we could get
more jobs, bona fide jobs."[15] The fact that online makers need to self-

justify by arguing for distinctions between work-for-free and work-for-pay underscores the sorry state of labor relations and economic conditions in convergent media. The amateurish charms of grassroots DIY, therefore, have clearly begun to pale as UGC is commodified and commercialized by major media companies.

If aspiring online workers are instrumental participants in the desperation to professionalize UGC, as described above, then their corporate clients and allies are architects bent on commercializing UGC. Sony provides Crackle.com, for example, a "mid-seven-figure production budget, allowing it to produce exclusive Web-only content in the $2,000 to $28,000 per episode range. These amounts are based on anticipated payback and revenue sharing from multipurposing and syndicat[ing] content to third party iPTV, social-networking and viral Web distribution sites, including MySpace, Facebook and AOL as well as various Sony [handheld] devices."[16] While these payment schemes upgrade the financial resources of amateur UGC producers significantly and make the "no royalty" business plans of pre-dot-com-crash predecessors like Pop.com and DEN seem callous, such relatively low-budget levels horrify seasoned TV producers, who see in these minuscule, budget-collapsing expectations a threat to their onscreen livelihoods. In their own publicity, Sony and Crackle.com seem oblivious to the fundamental contradiction that their commercialization of UGC has raised. Their business plans boldly, if illogically, state that the studio "will largely draw on professional-quality amateur video submitted by outsiders and filtered through an experienced 15-person staff." Welcome to the brave new doublespeak world of professionalized amateurism.

COLLAPSED WORKFLOWS AND LABOR HIERARCHIES

> Tales From the Bottom of the Film Business. . . . Life Below the Line. . . . I'm a filmmaker and writer, but most of the time, for money, I listen to stuff. (And I write this anonymously because you can't afford to piss people off when you need to eat).
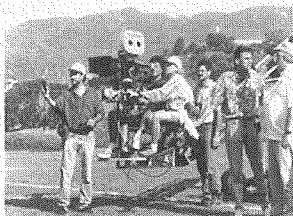> http://lifebelowtheline.blogspot.com

UGC's commercialization, and the growing confusion between professionalization and amateurism just described, can be productively understood alongside interrelated institutional changes in production (see figure 2). Specifically, digitization has facilitated a collapse and con-

Michael Negrin ASC with light meter; Harvy Rubin SOC behind camera

FIGURE 2 The "indie" do-it-yourself approach to bootstrapping labor was seen as a union killer by Hollywood camera operators, who discussed the topic on a Web site in the late 1990s (left). By 2007 the same camera organization (SOC) tries to promote itself and its ideals in the clutter of DIY-UGC with its own MySpace page (right).

fusion of production workflow and upended traditional labor hierarchies. Workflow refers to the route that screen content travels through a production organization and its technologies as it moves from the beginning (origination, imaging, recording) to the end (post-production, mastering, duplication, exhibition) of the production/distribution process. What the film/video trades now optimistically term hybrid workflows might more accurately be termed an unruly workflow free-for-all. This is because current workflows no longer follow self-evident linear stages that lead unproblematically to next stages according to decades-old convention. For example, the recent shift from 35mm duplicate negatives (DN) or film interpositives (IP) as a mastering format to the new digital intermediates (DI) format has broken down all kinds of heretofore sacrosanct job distinctions on the set and in post-production suites. In fact, the once linear sequence through which filmed material went before being printed and broadcast has fallen apart. Because of these recent shifts to digital, visualization and effects functions once reserved for post-production now dominate production, and skills once limited to production now percolate through post-production. Even as digital UGC has confused distinctions between the ostensible front end (professional producers) and back end (amateur users) of media creation and circulation, DI processes have confused the front end (cinematography, produc-

tion design, directing) and back end (digital and visual effects, colorizing, and directing) of both worker relations and the production workflow sequence. These forms of collapse and confusion are not unrelated.

Five examples dramatize these workflow reversals. First, visual effects supervisors (once relegated to post-production) now compete at the earliest stages during pre-production against two older crafts that traditionally controlled the "look" of a film/show for a director: the director of photography (DP) and the production designer (or art director). All three crafts—the DP, production designer, and visual effects (VFX) supervisor—now argue that they are entitled and responsible for the overall look of a film/video production. Second, the shift to the DI (as the new non-film mastering format) has caused the invention of wholly new jobs like the data wrangler. This worker must now manage the footage metadata (technical information about how to recreate the desired image in any format in the future) on the set during shooting and throughout the entire process. In the old days—before 2002—cinematographers and their assistants traditionally managed image metadata (basic color, exposure, processing, and printing information) throughout production. Today, however, the camera departments are ceding these functions since the images they film are stored on computer hard drives instead of film magazines. Third, the function of lab timing and color grading in post-production has shifted from one labor sector, with its own craft conventions (film lab timers), to another, with different craft conventions (broadcast video colorists), cultivating the sense of disenfranchisement in workers from the film-origination world. Fourth, increasing cost economies, miniaturization, and technical capabilities have moved some back-end post-production tools directly into the front end of the production chain (see figure 3). For example, Final Cut Pro editing systems are now commonly used by directors and their assistants during shoots for rough-cut and rough-color correction, while sophisticated digital previsualization tools developed to create the illusion of tracking shots in post-production (like Previzion HD) are now being brought out of computer-generated imagery (CGI) and post-production and onto the set during filming to allow directors to "previsualize" their mechanical shoots (rather than just digital effects). Fifth, front-end production tools and practices are increasingly dragged into the back end of post-production. For example, many DPS now demand and struggle with producers to gain the right to grade DVD masters to maintain the intended

FIGURE 3 After digital UGC, even pros push the limits of digital downsizing. Here a one-person crew bolts its post-production laptop editing "suite" to its camera, completely collapsing normal distinctions in the production to post-production "workflow."

look of a film for its home video distribution window (traditionally an afterthought in the workflow). The old sense of easily identifiable, successive stages (production work's beginning, middle, and end) no longer holds. As a result, job descriptions are up for grabs, not just for the prosumers described above, but for many seasoned professionals as well.

Said one vindicated self-serving new digital technology proponent, Mark Patel, in light of these unruly reversals in workflow, "In the traditional filmmaking model, the post process used to be a slave to production—in the hybrid model, the physical production process becomes slave to the digital realm."[17] The slavery metaphor suggests the real-world stakes involved in the collapse of workflows. Workers from traditional set-based filming modes (DPS, ACS [assistant camera operators], video-assist operators, production designers, and timers) face increasing underemployment from the collapse, while new digital workers (data wranglers, colorists, visual effects supervisors, and CGI artists) encroach on the once stable and regulated production space of the set. Digital proponents like Patel explain and justify the process in utopian and benign terms, arguing that "much like children, technology eventually needs to find its own way in the world." Such platitudes mask the real implications of the shift: decades-old, union-regulated, technically standardized, mentor-managed workflow assignments are crumbling in favor of

untested, non-union, nonstandardized, manufacturer-managed work-flow assignments.

Evangelists for collapsing digital workflows hype the aesthetic shift in seductive, simplistic, economic terms: "As with any production . . . the biggest cost will always be time and manpower. Where there are a lot of people working for a long time, the cost of technology is generally secondary. . . . Reducing the time to produce movies is [the] goal."[18] This advocate obscures, however, that digitization doesn't really save costs. It merely shifts most of the production budget away from human on-the-set workers into expensive digital technologies. The proponent here sharing his personal theory with other editors in the trade *Post* turns out, not illogically, to be the marketing director for a high-end proprietary CGI manufacturer selling the new digital pipeline.[19] Whether these re-marks can be called earnest video craft talk or stealthy trade marketing, the lesson is clear: digital technologies confuse both workflows and job hierarchies and promise savings by eliminating low-level jobs in order to centralize production at costly, high-level CGI studios. In this way, therefore, this "earnest" trade talk is really just part of a highly partisan smoke-and-mirrors high-tech economy promoted during a time of in-dustry instability.

Workflow was once conventionalized and managed by a long-standing coalition of labor groups, guilds, technologists, and studios. Now the ad-vent of wide-ranging nonstandardized digital cameras in production and digital work stations in post-production means that the "rules" of the new digital realm are being rewritten, not by unionized crafts workers but by individual corporations intent on selling their proprietary equip-ment (and thus the proprietary workflows that go with it). From 2004 to 2007 a supposed industry-wide coalition called High Def Expo made the following claims to anxious practitioners contemplating the shift to digi-tal: "Liberate your creative process! Discover the true freedom of a non-linear image workflow! . . . The tapeless revolution has spread . . . from post houses to cinematographers. This . . . workshop illuminates the process of becoming completely tapeless, illustrates the entire workflow from image acquisition to data archive, and shows you how you can join the non-linear, tapeless revolution."[20] Closer inspection of this industry-wide, high-def boot camp shows that it was primarily sponsored not by any craft association (like the American Society of Cinematographers [ASC] or American Cinema Editors [ACE]) or by neutral standards orga-

nizations (like the Society of Motion Picture and Television Engineers [SMPTE]) but by something far less collective, consensual, or ecumenical: Panasonic and its lens provider, Fujinon. The problem is that Panasonic's new "P2" workflow is different from Sony's new workflow, which is different from Technicolor's new workflow, which is different from Panavision's or Hitachi's or Phillips's workflows.[21]

WGC AS INDUSTRIAL RESPONSE: UNAUTHORIZED WEB SITES AND LEAKY STORYWORLDS

> It makes me crazy when I hear some producer who's making $7 million say they have to take a movie out of the country because labor here is too expensive. I'm making the lowest (hourly wage) on the set, but it's electricians and construction guys who are doing the hardest work with the biggest risks.
> Crew member complaining online about the lies and cruelty of producers

The mainstream workflow and technology changes just described do indeed matter to questions about UGC because all of the factors considered thus far work to stress and displace the oversupply of film/video professionals into online activities and worlds that are already well traveled by lay users and fans. Sometimes this online worker activity aims to argue for, justify, and reestablish long-standing forms of industrial legitimacy. Sometimes it betrays severe intercraft contention via the snarking churning within what feels increasingly like the industry's sinking old-media ship. At other times, WGC functions merely as social networking or as a means to find new clients and commercial work.[22]

Now more than ever, because of new and unruly online activities by workers, the industry is enmeshed in a messy dance to control information and gossip that pass from a studio or network to the trade press. Almost every film/TV company takes the position that all company information or news is proprietary. Confidentiality and nondisclosure agreements are obligatory, even for unpaid interns and production assistants (PAS). Unauthorized storytelling by workers is a threat that must be monitored and managed. Even if the film/video trades can be easily and regularly "bought off," individual workers are far more difficult to control. In essence, film/video institutions today are leaky. Online worker gossip can easily wash away the best-laid plans of a network's or studio's development and marketing schemes.

What started as an unruly online threat, however, was quickly hijacked as a mainstream corporate business strategy (see figure 4). Studio

FIGURE 4 Blogs by below-the-line production workers now offer "totally unauthorized" griping about producers and X-rays of job-related injuries (left), while production assistants post lame diaries of star sightings on the set (right).

marketing bosses, that is, soon saw this supposedly uncontrolled narrative cyber-insurgency as an opportunity for profitable countermeasures—specifically the creation of fake buzz. Fake online gossip and fan buzz by studios looks and sounds like authentic fan or practitioner buzz, and companies will go to great lengths to have their Web authors dumb down and de-style their stealth-gossip messages to make them look authentic. Far from being apologetic about this stealth practice, longtime studio bosses liken this practice to the ways that antibodies are used to fight infection in the body: "It's a viral marketing technique. . . . Those message boards have what we call 'seeding'—like you seed a lawn. They seed the board with [propaganda]."[23] TV executives show no remorse or even ambivalence when caught and accused of stealth espionage against fans, claiming that chat is no different than advertising. The practice is widespread: corporate employees—operating as stealthy lurkers and identity poseurs—actively masquerade among online fandoms and audiences. While this viral seeding started in chat rooms and fan sites, it now takes the form of UGC-esque videos systematically planted on YouTube and various sharing sites as well.

The ongoing battle between information leaking by workers and preemptive disinformation planting by corporations is only one example of a wide range of online digital activities that pit film and video workers against their corporate bosses. Another sobering example of film's and

television's use of digital media to manage information comes in the pre-YouTube form of online tracking boards.[24] Traditionally, gossip and buzz about screenplays and potential new projects in film and television circulated informally around Los Angeles through telephone conversations and casual meetings among those with enough clout to acquire or green-light a film or television series. The off-the-record and unobservable nature of these discussions reinforced and perpetuated the critical claims by outsiders, new writers, and producers that the industry was an old boys' network—in effect, a coalition comprised of those with similar interests even if they ostensibly worked for competitors. Shared gossip about scripts making the rounds could sink a project even before a screenwriter or producer went from studio A to studio B. A narrative grapevine ruled the development pipeline, controlled by executive and agency storytellers with privileged inside looks. Agency and studio tracking continues to take place through exclusive communication back channels—much to the consternation of writers and producers who would rather get a fair and unbiased reading of a script after they pitch it to a studio or network. Web-based FilmTracker spends considerable effort hyping and ensuring exclusivity and privacy for each of its tracking groups. It also describes the mission and purpose of its back-channel networks as a form of community building among (competing) executives, and it promises secrecy, privacy, and exclusivity. baselineFT's Film-Tracker service is only the most recent way that those in charge of film and television content control what gets developed. FilmTracker works by controlling how and which scripts get gossiped about and—more important—who gets to participate in generating the buzz that results. While stealth marketing, Internet lurking, and fake buzz work well in the gossipy world of viewers on the back end of distribution, as discussed above, rigidly controlled access to agency and studio tracking boards on the front end of development constrains practitioner gossip as well.

Although industry has found ways to rationalize and discipline online gossip as a business practice, gossip is by nature unofficial and unruly, never being completely controlled from the top. By September 2004 several groups mounted countermeasures to the heavy-handed control and exclusion typifying producers' tracking boards like FilmTracker. The WGA counterattacked on its Web site with a link to a screenwriters' Web board that tracked the reputations—good and bad—of producers across town. Once word spread, this online rebuttal board created howls of self-

righteous protest from producers and studios who claimed that it was "unfair" for screenwriters to take cheap shots at producers, especially from the cover of anonymity. Many producers found their reputations besmirched when screenwriters told tales of how they were exploited and abused. Although some producers earned high marks, many got hit hard. Screenwriters seemed perplexed at the negative response and double standard. Other online monitoring sites, like Totally Unauthorized and Defamer, have taken up the WGA's counter-studio-tracking-board ethos by posting damning behind-the-scenes stories about producers anonymously.

For a town built on maintaining the illusion of exclusivity for both its A-list talent and screen content, tiffs regularly spin out of control in the viral world of tracking and countertracking boards. Consider the following cease-and-desist order circulated widely online as a warning to those trained in the fine art of industrial gossip:

> We are counsel for Peter Jackson, Fran Walsh and Philippa Boyens. It has come to our attention that a copy of our clients' screenplay "The Lovely Bones" has unlawfully been placed on this tracking board without the consent of our clients, whose copyrighted works are being illegally exploited. A secret ID word has been imbedded [*sic*] in each copy of the screenplay and we are presently investigating the source of the leak and appropriate action will be taken. . . . We hereby demand that the webmaster of this tracking board immediately remove the screenplay from the site and that all individuals immediately cease and desist from any further dissemination of the screenplay.[25]

Defamer quickly mocked the ridiculous and illogical pretense of producer and director lawyers: "The Jackson camp should probably take pains not to throw too big a scare into the assistants; if the entire script-covering underclass finds itself too paranoid to touch *Bones* for fear they're holding a copy with the 'secret ID word' embedded within (we're guessing it's something like 'fucknewline'), negotiations for the sale might stall indefinitely as annoyed studio execs are forced to actually read the screenplay themselves."[26] This sorry, but symptomatic, interchange exposes the complete illogic of the industry trying to regulate and control screen information that the industry has first deliberately placed into a commercial viral environment defined by wild forwarding and excessive downloading.

> Upcoming [WGA strike] picket events which may be of interest: . . . Thursday will be the first in a series of "Teaching Thursdays" at Gate 2 at Warner Brothers from 9–12. This is a great idea, where writer/producers will gather to answer questions and discuss the craft with anyone who wants to ask. This week's genre is Medical Dramas. . . . I was at Paramount this morning, participating in the . . . picket. I'll always have a special place in my heart for Paramount, since it's where I had my first job.
>
> Screenwriter using WGA strike and What It's Like Web site to build solidarity
> and teach aspirants and outsiders how to write screenplays

All of the recent headlines about social networking and online video activities ignore the fairly basic point that social networking has always been the way that American film and television production has functioned. Online resources have dramatically increased the ways by which social networking is accomplished and advantage is leveraged by film and video workers in production cultures. I'd like to start this section by discussing three cases, the first a rather benign and optimistic one; the next, rather sobering and alarming ones; and the last showing how several parts of production culture have themselves been "YouTubed."[27]

Recent books, like *Convergence Culture*, celebrate the emergence of fan groups as productive resources for media companies.[28] What fewer acknowledge is that media workers themselves have been given additional productive tasks through professional social networking sites — as de facto research and development departments — for production equipment manufacturers, not just for the production companies and studios that officially employ them. Says Michael Horton, editor and founder of the four thousand–member Los Angeles Final Cut Pro User Group, "Most if not all of the changes and additions to FCP were the direct result of vocal users. . . . We knew that Apple was listening as they sent two representatives down to our first meeting. On three occasions we asked the world to give us their top 10 FCP requests. The majority of the top 10 results always found their way into new versions of FCP."[29] Under studio- and network-era Fordism, union workers regulated and relayed technical knowledge to younger assistants on the job. In the post-Fordist, post-network era outsourced contract workers create socio-professional networks to survive and master constantly changing hardware and software. Since the mid-1990s, major equipment manufacturers (Avid,

Apple, Media 100) have had direct access to these social networks via user-group message boards on the Web. Online access to worker social networks flattens the knowledge economy in the digital crafts by cutting out the managerial middlemen in the traditional union-based labor chains. This flattening of technical hierarchies makes the free flow of information and feedback two way.

Pre-YouTube-era Web sites, hosted by professional labor organizations—like the Society of Operating Cameramen (SOC)—regularly included overt social networking strategies intended to build solidarity among a widely dispersed set of workers. Sobering indications of the human stakes involved are found posted online by below-the-line workers like cinematographer Michael Negrin. He earnestly appeals to colleagues to resist indie newcomers on the set in a posting titled "Protecting the Role of the Camera Operator," where the threat to union worker livelihoods is described as coming from aspirants and outsiders—whom producers "discover," hire, and bring to the set.[30] They do not come up through the ranks but learn their craft in independent and low-budget sectors, like music video and indie festival film production. Even before UGC, the DIY ethos preached in many art and film schools and celebrated at Sundance-wannabe festivals worldwide produces edgy "artists" who mock and disregard long-protected union camera department assignments—much to the alarm of journeyman crew members. The current battle between UGC and WGC, therefore, has a long prehistory marked by tensions when just-discovered, multitasking outsiders get to cross over and become professionals. The era of YouTube and UGC has merely exacerbated this long-standing professional distrust of indies and outsiders.

One industrial response to YouTube has been the creation of professional film and video social networking sites that function as a combination job board, demo-reel showcase, gossip center, and trade news clearinghouse. ReelExchange is one of the most prominent of these professional video-sharing Web sites. Whereas FilmTracker, described above, is most heavily used by corporate types (producers, executives, and agents), ReelExchange is made for below-the-line film and video craft workers. The site directly mimics YouTube in design, iconography, and features. It promises potential video uploaders that the sharing/networking site will allow smaller-market film and video professionals to market themselves by uploading their demo reels, pitches, and bios for

interested producers and production companies nationwide who would not otherwise have access to them. As ReelExchange developed and grew, several factors made it increasingly apparent that the site would never have the kind of free-form, rhizomatically expanding user base that YouTube has achieved. For starters, some threshold of professionalism must be demonstrated or asserted to gain entry to the uploading imperative of these pros. The copying, hijacking, and editing mash-ups of others' video content that has made YouTube popular, for example, has not taken over ReelExchange. This restraint (and constraint) is for good reason, given the need to maintain at least some vestige of perceived protection for the copyright holders that submit their comp reels, excerpts, and demos for the site. It's not just Viacom and Warner Bros., therefore, that rail against video sharing. Those looking for work and commercial clients do so as well. Finally, the commercial ownership and sponsorship of ReelExchange says much about why the sharing site will never achieve the ubiquity of YouTube. This people's and professionals' sharing site was actually launched by two technical trade publications: *Millimeter* and *Digital Content.* Far more than an example of enabling social networking and video sharing, therefore, the site in fact serves as a lucrative marketing "sponge" that sucks up an incredible level of detail about professionals (site members who want crew assignments and contract productions) for sale to those that drive the production trades (equipment manufacturers, media corporations, and advertisers). The ever-thinner printed production trades are clearly on their way out. In ReelExchange, *Millimeter* and *Digital Content* dramatically show what the future of film/video industry journalism is: a massive, nonlinear, video sharing site that clearly has as much to do with client research, corporate sales, and stealth marketing as it does with the faux-populism of video uploading.

Similarly, a look at prodblogs shows how rich the terrain of wGc can be for media studies scholars. Prodblogs don't just leak behind-the-scenes info as described above (which fuels the celebrity news industry), they also offer wide-ranging, provocative online self-disclosures and critiques from film and video workers. Some prodblogs share the blogosphere's snarky cynicism but direct it against their film and Tv bosses. The site Burbanked complains: "I spent nearly a decade toiling in semi-obscurity in the development trenches of the Hollywood studio system, most of that time at Warner Bros. where I read roughly 14,238 screen-

plays and enjoyed about 20 of them. I played a small but critical—*criti-cal!*—part in the development and production of about three movies."[31] The site's motto is "At *Burbanked*, screenwriting is king, no celebrity is safe and much of the marketing of studio movies is crap." Prodblogs by below-the-line workers tend to mix hard-edged corporate critiques with affirmations of the fortitude, commitment, and physical suffering required by the craft. The Blood, Sweat, and Tedium site makes worker suffering surreal by mocking TV producers obsessed with shooting in downtown Los Angeles because of its "gritty look," ignoring worker downsides: "cable runs fully submerged beneath six inches of shit and piss in those alleys [from homeless residents], where a lungful of the foul, choking stench is enough to make you vomit."[32] This is about as far from the executive-focused, utopian, buzz-driven studio tracking boards described above as one could get.

Yet what is remarkable about these sites and many others is their earnest, extensive pedagogical tendency to teach and mentor. Even the snarkiest sites regularly settle down to deliver incredibly detailed and valuable lessons about how specific crafts, technologies, labor arrangements, modes of production, auteurs, and genres work. In fact, I've found the prodblogosphere to offer more detailed and up-to-date primers on new film and video technologies and methods than the production textbooks in university classrooms and film schools. Where does this urge to teach—and to teach seriously and regularly—come from? More than just an opportunity to network, Seriocity, a blog by TV writer Kay Reindl, provides a detailed, knowing critique of the widespread practice of executive note-giving.[33] Such a practice doesn't just "crush the soul" of the creative cadre. It also destroys things that matter to the corporations as well: ratings, box office, and financial prospects. Script Goddess provides regular postings that lay out the details and nuances of one of the most underappreciated but important crafts on a set: script supervision. Unlike production textbooks or the trades (which disregard script supervision), this site provides prescient critiques of arrogant but naïve indie filmmakers and other ego-flawed "artists" (like DPs and directors) on the set:

> The first-time director was so enamored with the actors that he let our leading actor have free rein, which is great if you've got miles of film to burn and lots of time to let the actor "explore his character." Not so

good if you're the one trying to edit this crap together. I told him again and again that the actor can't be loud and arms flailing in the wide, and then soft spoken and demure in the close up. Not to mention not repeating his actions. The arrogant newbie director ignored my pleas, but fortunately for me while watching the dailies the editor freaked out and sat Cecil B. down and said, "I can't cut this crap together if you continue down this road." Thankfully, Cecil saw the light.[34]

One of the very best prodblogs that does for grips and electricians what Script Goddess does for continuity workers is Totally Unauthorized. Written by a lighting technician who calls herself Peggy Archer, this site provides regular critiques of the gender politics on sets alongside very useful tips about how to prevent electrocution, tie off electrical cable, and recuperate from lower back and knee injuries.[35] Unsolicited, Archer discloses insights on the peculiarities of working methods for which a scholar would have to work considerably to access. She explains, for example, the union logic of safe-and-slow gaffing: "We also don't want to look like we're in a hurry on set. If we're scrambling around like rats trying to find the only route off a sinking ship, the powers-that-be assume we're not in control of the situation and should perhaps be replaced by a more competent crew first thing Monday morning."[36]

While WGC, social networking sites, prodblogging, and self-disclosure share some traits with UGC, they provide stark contrasts to the self-reflexivity and online self-disclosure that issue steadily from contemporary film/TV corporations. Understanding digitization means acknowledging the significant gaps that exist between the corporate world—driven by viral marketing—and crew and worker worlds, where unauthorized self-disclosures provide a far more complex picture of digital television than DVD bonus tracks, producer Q&As, behind-the-scenes featurettes, tightly organized trade press junkets, and making-of documentaries. WGC should be seen as a necessary antidote and corrective to both the viral spin of corporate PGU and the populist-resistant assumptions of UGC.

THE LOGIC OF UGC/PGU/WGC

While media corporations may deem online trade narratives by their own workers as unruly threats, unauthorized WGCs serve several more basic functions in film and television production cultures—as ratio-

nalizations, solidarity making, guarantors of career mobility, forms of social pedagogy, and self-serving legitimation. Through these worker-generated practices, production personnel close ranks to weather change and mark their professional boundaries. These intense forms of communicative and narrative interaction fit ethnographer Andreas Wittel's model of networked sociality, in which technology-based cultural activities substitute for actual community for independent professionals in the new creative industries.[37] By circulating highly reflexive forms among themselves, practitioners do not simply learn new things. They also work to convince themselves that their distinctive value to the industry lies in some unique specialty of their guild, craft, or trade association. These narratives of self-affirmation, then, fulfill a broader need that labor sociologist Harry Braverman finds across the newer, flexible industries. That is, trade narratives verify that a storyteller has a specialized expertise that goes beyond the obligations of simple labor and proves that he or she can do the one thing required of any professional in film and TV: successfully, and repeatedly, negotiate one's own value.[38]

The examples considered here indicate that practitioners snark, expose, blog, and tell online trade stories as part of industrial habit and that the intensity of trade storytelling is extreme because professionals must work far harder to restrict access to industries where labor is as open as it is in Hollywood than in industries where it is closed.[39] In this way, production workers are less like those who tell trade stories in closed professions that restrict access through strict credentialing (like lawyers) than they are like those in professions marked by openness and calculated self-reliance (like salesmen or entrepreneurs). In the case of film and video production, workers tell trade stories to themselves and snark as forms of turf marking and exclusion, as ways to will into being professional affinities, and as navigational tactics their professional communities need in order to face technological change and economic uncertainty.

Many of the PGC activities described in this chapter make sense in the context of the following three basic goals, while WGC constantly shoots up unauthorized online flak to cloud the corporations' intent on making these same principles a reality:

(1) Everyone will work for free, or as close to it as possible. (*UGC as a gold mine for the overproduction of cost-effective screen content.*)

(2) Media corporations will gain advantage by creating experience-based work worlds that correspond to the new "experience economy" of consumers. (*Social networking as professional capital in lieu of wages.*)

(3) Industrial advantage will mean increasingly transforming the outsourced television production workspace into a nonhierarchical "ad-hocracy." (*Independent contractor crews and teams modeled on informal families and crowdsourcing.*)

The result is not that executives will continue to pursue viral methods only as a consumer phenomenon.[40] Rather, the industry's professional production mode for film and video workers will itself become increasingly viral and nonlinear. The online practices examined here suggest that industrial viral production practices are currently among the most cost-effective models for professional production in the hypercompetitive multichannel multimedia marketplace.

The amazing thing about this new unruly, collapsed, and volatile world of digital television production culture and prodblogging is that information and access to it—far from being restricted and controlled—leak irretrievably and excessively from it. Georgina Born, whose recent pioneering book on the BBC was made possible because of an unusual degree of access granted to the author by the corporation—sets up her entire book with a prologue titled "An Anthropologist among the White City Natives."[41] What Born and other scholars should also consider is that thousands of film and video production workers are themselves self-consciously banging out self-ethnographies on a weekly basis on behind-the-scenes blogs—like http://angryanthropologist.blogspot.com. Workers on these sites post insider knowledge—and analysis—in part because industry observers, scholars, and writers frequently err in describing even basic industrial practices. Television studies would benefit by taking this intense, sometimes agitated, and almost always jaded and cynical world of WGC—labor's explicit behind-the-scenes self-ethnographies—seriously. Examining UGC provides only half the story of how television is being digitized since both media corporations and their workers have been posing, posting, lurking, lying, flaming, fabricating, spinning, snarking, and defaming for some time. The professional, vocational, and commercial reasons for this kind of worker/user content generation are worth acknowledging with more care and detail.

One below-the-line electricians' Web site showed just how willing crew members are to share accurate information about production, even to writers and analysts who are after bigger intellectual and cultural fish: "If you're writing something and aren't sure about what any particular crew person does, please don't guess—just email me and ask. . . . I'll be more than happy to help. Unless you want me to go insane—in that case, just keep up 'with all the gaffers.' I'll eventually snap. I promise."[42]

NOTES

My thanks to Bryan Hartzheim for his research assistance on UGC and WGC issues and to Miranda Banks and Vicki Mayer for their many insights in the area of production cultures.

1. James Hibbard, "TV Industry Battles Piracy Hydra," *Television Week*, August 13, 2007, 1, 27.
2. See the trade's alarmed editorial, "Who Will Step Up to Disband TV's Pirates," *Television Week*, August 13, 2007, 9.
3. Stephanie Robbins, "Viral Video Pick of the Week," *Television Week*, August 13, 2007, 3.
4. While such duplicity is of course far from new in Hollywood or network television, the explosion of digital applications and uses outside of the heretofore regulated and rationalized industry has made doublespeak an obligatory and sometimes manic part of trade talk today.
5. For these characterizations and differences, see Nicholas Negroponte, *Being Digital* (New York: Alfred A. Knopf, 1995); Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (Cambridge, Mass.: MIT Press, 2006); Lev Manovich, *The Language of New Media* (Cambridge, Mass.: MIT Press, 2001); and Daniel Schiller, *Digital Capitalism* (Cambridge, Mass.: MIT Press, 1999).
6. While Google struggled to "monetize" its new partner YouTube, by 2007 other corporations took a more hostile approach, as when Viacom sued YouTube, legally pressuring the sharing site to mine and disclose its own data on purportedly stolen Viacom properties churning throughout the site.
7. Other examples of Hollywood's and U.S. prime-time television's buying out of outsider alternatives include Italian neorealism in the 1940s, cinema verité documentary in the 1970s, music videos in the 1980s, and home video in the 1990s.
8. The ratings comparisons from Nielsen NetRatings are quoted in Daisy Whitney, "Yahoo Revamps Video: One-Stop Site Designed to Draw Ads," *Television Week*, August 6, 2007, 1, 40.
9. Ibid.
10. Mike Folgner quoted in Daisy Whitney, "Yahoo Revamps Video: One-Stop Site Designed to Draw Ads," *Television Week*, August 6, 2007, 1, 40.

11. Paoletti quoted in ibid.

12. Baker quoted in Dawn C. Chmielewski, "Taking Amateur Video Up a Notch: Sony's Remade Crackle Will Award Talent with a Shot at Funding and Promotion," *Los Angeles Times*, July 16, 2007, C1, C3; emphasis added.

13. Spielberg's support seems unlike a marketplace tactic, and instead evokes the kind of patronage of artists that the wealthy Medici family and bank popularized in Florence and Tuscany during the Renaissance.

14. Alex Lindsay, quoted in Daisy Whitney, "Digital Dealmakers," *Television Week*, August 16, 2007, 8.

15. Leslie Robinson, a blog writer at ColoradoConfidential.com, quoted in Associated Press, "Bloggers Seeking to Form a Labor Union," *Los Angeles Times*, August 6, 2007, C2.

16. This quote and the one that follows are from Jim Benson, "Grouper Drops User-Generated Video," *Broadcasting and Cable*, July 16, 2007; http://www.broadcastingcable.com/article.

17. Maurice Patel, "Shifting Paradigms in Film Post Workflows," *Post*, July 2007, 56.

18. Ibid., 56.

19. *Post*, a film and video editors' trade journal, acknowledges that Maurice Patel is the "director of product marketing for Autodesk Media and Entertainment."

20. http://www.hdexpo.net/education/varicamp/vari_registration.html.

21. As if digitization were not confusing or disruptive enough, professional workers now must also pay premium amounts at enabling workshops (sponsored by Panasonic) to retool their skill sets, even though those educating the professional attendees channel them into narrow, soon-to-be obsolete proprietary technologies. What frequently happens, however, is that lower-budgeted workers regularly resist this corporate herding by hacking and cracking open proprietary processes in order to produce digital work-arounds that independents (not manufacturers) can control on a more cost-effective basis. Digital hacking, therefore, is also a valued production worker skill. See Nick Dager, "A Refreshing Look at Digital Workflow," *Post*, July 2007, 16.

22. The epigraph above is quoted in Mary McNamara, "A Voice for the Techies," *Los Angeles Times*, December 4, 2005, E1, E8.

23. Terry Semel, former chairman and CEO of Warner Bros. studios, quoted in Dana Calvo, "Fake Fans, Fake Buzz, Real Bucks," *Los Angeles Times*, March 20, 2001, A1.

24. This paragraph and the next one on studio tracking boards are adapted from chapter 2, "Trade Stories and Career Capital," in Caldwell, *Production Culture: Industrial Reflexivity and Critical Practice in Film and Television* (Durham, N.C.: Duke University Press, 2008), 69–109.

25. This cease and desist warning was quoted in Defamer, "Peter Jackson's Lawyers Don't Want Unapproved Assistants Reading 'The Lovely Bones.'" http://

defamer.gawker.com/257257/peter-jacksons-lawyers-dont-want-unapproved-assistants-reading--the-lovely-bones. Accessed April 18, 2010.

26. Ibid.

27. Source for epigraph above: "What It's Like," *lisaklink blog*, posted January 22, 2008; http://www.lisaklink.com.

28. Henry Jenkins's important and influential book, *Convergence Culture*.

29. Horton interviewed in David E. Williams, "Post Modern: Michael Horton, President of the Los Angeles Final Cut Pro User Group, Muses on the Future of NLES," *DV*, September 2007, 30.

30. Negrin's statement was posted on the SOC's *Camera Operators Magazine* Web site, a reprint from the spring–summer 1996 issue of the *Operating Cameraman*, accessed July 21, 2003, 1 (no longer posted). Available online at: http://faculty.uncsa.edu/film/elkins/380/soc%20articles/protecting_camera_operator.pdf (accessed April 18, 2010).

31. Alan Lopuszynski, "About," http://burbanked.com/about.

32. This descent-into-hell allegory for below-the-line production is from http://hollywoodjuicer.blogspot.com (accessed April 19, 2008).

33. Comment posted March 19, 2008; http://seriocity.blogspot.com.

34. Available on the blog Script Goddess, at http://scriptsupervisorforum.blogspot.com.

35. Peggy Archer is a pseudonym used to protect the identity of one of the most popular below-the-line bloggers/complainers on the Totally Unauthorized Web site, http://filmhacks.wordpress.com.

36. Totally Unauthorized, available at http://filmhacks.wordpress.com.

37. This theory is based on ethnographic work in the new media sector in England. See Andreas Wittel, "Toward a Network Sociality," *Theory, Culture, and Society* 18, no. 6 (2001): 51–77.

38. See Harry Braverman, *Labor and Monopoly Capitalism: The Degradation of Work in the Twentieth Century* (New York: Review Press, 1998), 82. I thank Vicki Mayer for suggesting this connection.

39. This concept of the varying value of self-selling in both open and closed labor systems is developed more broadly by Keith M. MacDonald, *The Sociology of Professions* (London: Sage, 1995), 184–85.

40. Viral marketing will continue to rein in marketing, even as it spurs new production approaches.

41. See Georgina Born, *Uncertain Vision: Birt, Dyke and the Reinvention of the BBC* (London: Vintage, 2005).

42. Peggy Archer, posted November 14, 2006; Totally Unauthorized, available at http://filmhacks.wordpress.com.