

HERE COMES EVERYBODY

THE POWER OF ORGANIZING

WITHOUT ORGANIZATIONS

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decorative art; we make a distinction between the general ability to write and the professional ability to write in a calligraphic hand, just as we do between the general ability to drive and the professional ability to drive a race car. This is what is happening today, not just to newspapers or to media in general but to the global society.

CHAPTER 4

PUBLISH, THEN FILTER

The media landscape is transformed, because personal communication and publishing, previously separate functions, now shade into one another. One result is to break the older pattern of professional filtering of the good from the mediocre before publication; now such filtering is increasingly social, and happens after the fact.

Here, on a random Tuesday afternoon in May, is some of what is on offer from the world's mass of amateurs.

At LiveJournal, Kelly says:

yesterdayyyyy, after the storm of the freaking century, i went to the mall with deanna, dixon and chris. we ran into everyone in the world there, got food, and eventually picked out clothes for dixon. found katie and ryan and forced katie to come back to my house with me and dixon. then deanna came a little after, then jimmy pezz, and then lynn. good times,

good times. today, i woke up to my dog barking like a maniac and someone knocking on my window. i was so freaked out, but then jackii told me it was jack so i was just like whatever and went back to sleep. i have no idea what im doing today but par-tyyy tonighttt

At YouTube texasgirly1979's twenty-six-second video of a pit bull nudging some baby chicks with his nose has been viewed 1,173,489 times.

At MySpace a user going by Loyonon posts a message on Julie's page:

Julieeeeeeeee I can't believe I missed you last night!!! Trac talked to you and said you were TRASHED off your ASS! Damn, I missed it. lol ["laughing out loud"]

At Flickr user Frecklescorp has uploaded a picture of a woman at a fancy dress party, playing a ukulele.

At Xanga user Angel_An_Of_Lips says:

Hey every1 srry i havent been on a while i have been caught up in a lot of things like softball and volleyball my new dog and im goin to Tenn. on thursday so i wont be on here for bout a week but i promise i will get on and show pic. and michigan was so funnnn~! welp we got a jack russel terrier and this is wut it looks like!! isnt he sooo cute. . . i no!!!

welp thats all i got to say oh oh yah i got my hair cut it is in my pic. cool uhh . . . ~!

And that, of course, is a drop in the bucket. Surveying this vast collection of personal postings, in-joke photographs, and poorly shot video, it's easy to conclude that, while the old world of scarcity may have had some disadvantages, it spared us the worst of amateur production. Surely it is as bad to gorge on junk as to starve?

The catchall label for this material is "user-generated content." That phrase, though, is something of a misnomer. When you create a document on your computer, your document fits some generic version of the phrase, but that isn't really what user-generated content refers to. Similarly, when Stephen King composes a novel on his computer, that isn't user-generated content either, even though Mr. King is a user of software just as surely as anyone else. User-generated content isn't just the output of ordinary people with access to creative tools like word processors and drawing programs; it requires access to *re*-creative tools as well, tools like Flickr and Wikipedia and weblogs that provide those same people with the ability to distribute their creations to others. This is why the file on your computer doesn't count as user-generated content—it doesn't find its way to an audience. It is also why Mr. King's novel-in-progress doesn't count—he is paid to get an audience. User-generated content is a group phenomenon, and an amateur one. When people talk about user-generated content, they are describing the ways that users create and share media with one another, with no professionals any-

where in sight. Seen this way, the idea of user-generated content is actually not just a personal theory of creative capabilities but a social theory of media relations.

MySpace, the wildly successful social networking site, has tens of millions of users. We know this because the management of MySpace (and of its parent company, News Corp) tells the public how many users they have at every opportunity. But most users don't experience MySpace at the scale of tens of millions. Most users interact with only a few others—the median number of friends on MySpace is two, while the average number of “friends” is fifty-five. (That latter figure is in quotes because the average is skewed upward by individuals who list themselves as “friends” of popular bands or of the site's founder, Tom.) Even this average of fifty-five friends, skewed upward as it is, demonstrates the imbalance: the site has had more than a hundred million accounts created, but most people link to a few dozen others at most. No one (except News Corp) can easily address the site's assembled millions; most conversation goes on in much smaller groups, albeit interconnected ones. This pattern is general to services that rely on social networking, like Facebook, LiveJournal, and Xanga. It is even true of the weblog world in general—dozens of weblogs have an audience of a million or more, and millions have an audience of a dozen or less.

It's easy to see this as a kind of failure. Who would want to be a publisher with only a dozen readers? It's also easy to see why the audience for most user-generated content is so small, filled as it is with narrow, spelling-challenged observations about going to the mall and picking out clothes for

Dixon. And it's easy to deride this sort of thing as self-absorbed publishing—why would anyone put such drivel out in public?

It's simple. They're not talking to you.

We misread these seemingly inane posts because we're so unused to seeing written material in public that isn't intended for us. The people posting messages to one another in small groups are doing a different kind of communicating than people posting messages for hundreds or thousands of people to read. More is different, but less is different too. An audience isn't just a big community; it can be more anonymous, with many fewer ties among users. A community isn't just a small audience either; it has a social density that audiences lack. The bloggers and social network users operating in small groups are part of a community, and they are enjoying something analogous to the privacy of the mall. On any given day you could go to the food court in a mall and find a group of teenagers hanging out and talking to one another. They are in public, and you could certainly sit at the next table over and listen in on them if you wanted to. And what would they be saying to one another? They'd be saying, “I can't believe I missed you last night!!! Trac talked to you and said you were TRASHED off your ASS!” They'd be doing something similar to what they are doing on LiveJournal or Xanga, in other words, but if you were listening in on their conversation at the mall, as opposed to reading their post, it would be clear that you were the weird one.

Most user-generated content isn't “content” at all, in the sense of being created for general consumption, any more than a phone call between you and a relative is “family-

generated content.” Most of what gets created on any given day is just the ordinary stuff of life—gossip, little updates, thinking out loud—but now it’s done in the same medium as professionally produced material. Similarly, people won’t prefer professionally produced content in situations where community matters: I have a terrible singing voice, but my children would be offended if I played a well-sung version of “Happy Birthday” on the stereo, as opposed to singing it myself, badly. Saying something to a few people we know used to be quite distinct from saying something to many people we don’t know. The distinction between communications and broadcast media was always a function of technology rather than a deep truth about human nature. Prior to the internet, when we talked about media, we were talking about two different things: broadcast media and communications media. Broadcast media, such as radio and television but also newspapers and movies (the term refers to a message being broadly delivered from a central place, whatever the medium), are designed to put messages out for all to see (or in some cases, for all buyers or subscribers to see). Broadcast media are shaped, conceptually, like a megaphone, amplifying a one-way message from one sender to many receivers. Communications media, from telegrams to phone calls to faxes, are designed to facilitate two-way conversations. Conceptually, communications media are like a tube; the message put into one end is intended for a particular recipient at the other end.

Communications media was between one sender and one recipient. This is a one-to-one pattern—I talk and you listen, then you talk and I listen. Broadcast media was between one

sender and many recipients, and the recipients couldn’t talk back. This is a one-to-many pattern—I talk, and talk, and talk, and all you can do is choose to listen or tune out. The pattern we *didn’t* have until recently was many-to-many, where communications tools enabled group conversation. E-mail was the first really simple and global tool for this pattern (though many others, like text messaging and IM, have since been invented).

Now that our communications technology is changing, the distinctions among those patterns of communication are evaporating; what was once a sharp break between two styles of communicating is becoming a smooth transition. Most user-generated content is created as communication in small groups, but since we’re so unused to communications media and broadcast media being mixed together, we think that everyone is now broadcasting. This is a mistake. If we listened in on other people’s phone calls, we’d know to expect small talk, inside jokes, and the like, but people’s phone calls aren’t out in the open. One of the driving forces behind much user-generated content is that conversation is no longer limited to social cul-de-sacs like the phone.

The distinction between broadcast and communications, which is to say between one-to-many and one-to-one tools, used to be so clear that we could distinguish between a personal and impersonal message just by the type of medium used. Someone writing you a letter might say “I love you,” and someone on TV might say “I love you,” but you would have no trouble understanding which of those messages was really addressed to you. We place considerable value on messages that are addressed to us personally, and we are good at distin-

guishing between messages meant for us individually (like love letters) and those meant for people like us (like those coming from late-night preachers and pitchmen). An entire industry, direct mail, sprang up around trying to trick people into believing that mass messages were really specifically addressed to them personally. Millions of dollars have been spent on developing and testing ways of making bulk advertisements look like personal mail, including addressing the recipient by name and printing what looks like handwritten memos from the nominal sender. My annoyance at getting mail exhorting someone named Caly Shinky to “Act now!” comes from recognizing this trick while seeing it fail. Home shopping television shows use a related trick, instructing their phone sales representatives to be friendly to the callers and to compliment them on their good taste in selecting whatever it is they are buying, because they know that at least some of the motivation to buy comes from a desire to alleviate the loneliness of watching television. Though this friendliness makes each call take longer on average, it also makes the viewer happy, even though the original motivation to call came from watching people on TV—people who cannot, by definition, care about you personally.

Some user-generated content, of course, is quite consciously addressed to the public. Popular weblogs like Boing Boing (net culture), the Huffington Post (left-wing U.S. politics), and Power Line (right-wing U.S. politics) are all recognizably media outlets, with huge audiences instead of small clusters of friends. But between the small readership of the volleyball-playing *Angel_An_Of_Lips* on Xanga and the audience of over a million for Boing Boing, there is no

obvious point where a blog (or indeed any user-created material) stops functioning like a diary for friends and starts functioning like a media outlet. Alisara Chirapongse (aka gnarlykitty) wrote about things of interest to her and her fellow Thai fashionistas, and then, during the coup, she briefly became a global voice. Community now shades into audience; it’s as if your phone could turn into a radio station at the turn of a knob.

The real world affords us many ways of keeping public, private, and secret utterances separate from one another, starting with the fact that groups have until recently largely been limited to meeting in the real world, and things you say in the real world are heard only by the people you are talking to and only while you are talking to them. Online, by contrast, the default mode for many forms of communication is instant, global, and nearly permanent. In this world the private register suffers—those of us who grew up with a strong separation between communication and broadcast media have a hard time seeing something posted to a weblog as being in a private register, even when the content is obviously an in-joke or ordinary gossip, because we assume that if something is out where we can find it, it must have been written for us.

The fact that people are all talking to one another in these small clusters also explains why bloggers with a dozen readers don’t have a small audience: they don’t have an audience at all, they just have friends. In fact, as blogging was getting popular at the beginning of this decade, the blogging software with the most loyal users was none other than LiveJournal, which had more clusters of friends blogging for one another than any

other blogging tool. If blogging were primarily about getting a big audience, LiveJournal should have suffered the most from disappointed users abandoning the service, but the opposite was the case. Writing things for your friends to read and reading what your friends write creates a different kind of pleasure than writing for an audience. Before the internet went mainstream, it took considerable effort to say something that would be heard by a significant number of people, so we regard any publicly available material as being offered directly to us. Now that the cost of posting things in a global medium has collapsed, much of what gets posted on any given day is in public but not for the public.

Fame Happens

It's also possible to make the opposite mistake: not that conversational utterances are publishing, but that all publications are now part of a conversation. This view is common, though, and is based on the obvious notion that the Web is different from broadcast media like TV because the Web can support real interaction among users.

In this view, the effects of television are mainly caused by its technological limits. Television has millions of inbound arrows—viewers watching the screen—and no outbound arrows at all. You can see Oprah; Oprah can't see you. On the Web, by contrast, the arrows of attention are all potentially reciprocal; anyone can point to anyone else, regardless of geography, infrastructure, or other limits. If Oprah had a weblog, you could link to her, and she could link to you. This potential

seems as if it should allow everyone to interact with everyone else, undoing the one-way nature of television. But calling that potential interactivity would be like calling a newspaper interactive because it publishes letters to the editor.

The Web makes interactivity technologically possible, but what technology giveth, social factors taketh away. In the case of the famous, any potential interactivity is squashed, because fame isn't an attitude, and it isn't technological artifact. Fame is simply an imbalance between inbound and outbound attention, more arrows pointing in than out. Two things have to happen for someone to be famous, neither of them related to technology. The first is scale: he or she has to have some minimum amount of attention, an audience in the thousands or more. (This is why the internet version of the Warhol quote—"In the future everyone will be famous to fifteen people"—is appealing but wrong.) Second, he or she has to be unable to reciprocate. We know this pattern from television; audiences for the most popular shows are huge, and reciprocal attention is technologically impossible. We believed (often because we wanted to believe) that technical limits caused this imbalance in attention. When weblogs and other forms of interactive media began to spread, they enabled direct, unfiltered conversation among all parties and removed the structural imbalances of fame. This removal of the technological limits has exposed a second set of social ones.

Though the possibility of two-way links is profoundly good, it is not a cure-all. On the Web interactivity has no technological limits, but it does still have strong cognitive limits: no matter who you are, you can only read so many weblogs, can trade e-mail with only so many people, and so on. Oprah has

e-mail, but her address would become useless the minute it became public. These social constraints mean that even when a medium is two-way, its most popular practitioners will be forced into a one-way pattern. Whether Oprah *wants* to talk to each and every member of her audience is irrelevant: Oprah *can't* talk to even a fraction of a percent of her audience, ever, because she is famous, which means she is the recipient of more attention than she can return in any medium. These social constraints didn't much matter at small scale. In the early days of weblogs (prior to 2002, roughly) there was a remarkable and loose-jointed conversation among bloggers of all stripes, and those with a reasonable posting tempo could count themselves one of the party. In those days weblogging was mainly an interactive pursuit, and it happened so naturally that it was easy to imagine that interactivity was a basic part of the bargain.

Then things got urban, with millions of bloggers and readers. At this point social limits kicked in. If you have a weblog, and a thousand other bloggers point to you, you cannot read what they are saying, much less react. More is different: cities are not just large towns, and a big audience is not just a small one cloned many times. The limits on interaction that come with scale are hard to detect, because every visible aspect of the system stays the same. Nothing about the software or the users changes, but the increased population still alters the circumstances beyond your control. In this situation, no matter how assiduously someone wants to interact with their readers, the growing audience will ultimately defeat that possibility. Someone blogging alongside a handful of friends can read everything those friends write

and can respond to any comments their friends make—the scale is small enough to allow for a real conversation. Someone writing for thousands of people, though, or millions, has to start choosing who to respond to and who to ignore, and over time, ignore becomes the default choice. They have, in a word, become famous.

Glenn Reynolds, a homegrown hero of the weblog world, reports over a million unique viewers a month for Instapundit .com, a circulation that would put him comfortably in the top twenty daily papers in the United States. You can see how interactivity is defeated by an audience of this size—spending even a minute a month interacting with just ten thousand of his readers (only one percent of his total audience) would take forty hours a week. This is what “interactivity” looks like at this scale—no interaction at all with almost all of the audience, and infrequent and minuscule interaction with the rest, and it has implications for media of all types. Weblogs won't destroy the one-way mirror of fame, and “interactive TV” is an oxymoron, because gathering an audience at TV scale defeats anything more interactive than voting for someone on *American Idol*.

The surprise held out by social tools like weblogs is that scale alone, even in a medium that allows for two-way connections, is enough to create and sustain the imbalance of fame. The mere technological possibility of reply isn't enough to overcome the human limits on attention. Charles Lindbergh couldn't bear to let anyone else answer his fan mail, promising himself he would get around to it eventually (which, of course, he never did). Egalitarianism is possible only in small social systems. Once a medium gets past a certain size, fame is a forced move. Early reports of the death of traditional media

portrayed the Web as a kind of anti-TV—two-way where TV is one-way, interactive where TV is passive, and (implicitly) good where TV is bad. Now we know that the Web is not a perfect antidote to the problems of mass media, because some of those problems are human and are not amenable to technological fixes. This is bad news for that school of media criticism that has assumed that the authorities are keeping the masses down. In the weblog world there are no authorities, only masses, and yet the accumulated weight of attention continues to create the kind of imbalances we associate with traditional media.

The famous are different from you and me, because they cannot return or even acknowledge the attention they get, and technology cannot change that. If we want large systems where attention is unconstrained, fame will be an inevitable by-product, and as our systems get larger, its effects will become more pronounced, not less. A version of this is happening with e-mail—because it is easier to ask a question than to answer it, we get the curious effect of a group of people all able to overwhelm one another by asking, cumulatively, more questions than they can cumulatively answer. As Merlin Mann, a software usability expert, describes the pattern:

Email is such a funny thing. People hand you these single little messages that are no heavier than a river pebble. But it doesn't take long until you have acquired a pile of pebbles that's taller than you and heavier than you could ever hope to move, even if you wanted to do it over a few dozen trips. But for the person who took the time to hand you their pebble,

it seems outrageous that you can't handle that one tiny thing. "What 'pile'? It's just a pebble!"

E-mail, and particularly the ability to create group conversations effortlessly without needing the permission of the recipients, is providing a way for an increasing number of us to experience the downside of fame, which is being unable to reciprocate in the way our friends and colleagues would like us to.

The limiting effect of scale on interaction is bad news for people hoping for the dawning of an egalitarian age ushered in by our social tools. We can hope that fame will become more dynamic, and that the elevation to fame will be more bottom-up, but we can no longer hope for a world where everyone can interact with everyone else. Whatever the technology, our social constraints will mean that the famous of the world will always be with us. The people with too much inbound attention live in a different environment from everyone else; to paraphrase F. Scott Fitzgerald, the attention-rich are different from you and me, in ways that are not encapsulated by the media they use, and in ways that won't go away even when new media arrive.

For the last fifty years the two most important communications media in most people's lives were the telephone and television: different media with different functions. It turns out that the difference between conversational tools and broadcast tools was arbitrary, but the difference between conversing and broadcasting is real. Even in a medium that allowed for perfect interactivity for all participants (something we have a reasonable approximation of today), the limits of human cognition will mean that scale alone will kill conversa-

tion. In such a medium, even without any professional bottlenecks or forced passivity, fame happens.

Filtering as a Tool for Communities of Practice

Comparisons between the neatness of traditional media and the messiness of social media often overlook the fact that the comparison isn't just between systems of production but between systems of filtering as well. You can see how critical filtering tools are to the traditional landscape if you imagine taking a good-sized bookstore, picking it up, and shaking its contents out onto a football field. Somewhere in the resulting pile of books lie the works of Aristotle, Newton, and Auden, but if you wade in and start picking up books at random, you're much likelier to get *Love's Tender Fury* and *Chicken Soup for the Hoosier Soul*. We're so used to the way a bookstore is laid out that we don't notice how much prior knowledge we need to have about its layout and categories for it to be even minimally useful. As the investor Esther Dyson says, "When we call something intuitive, we often mean familiar."

The hidden contours of the filtering problem shaped much of what is familiar about older forms of media. Television shows, for instance, come in units of half an hour, not because the creators of television discovered that that is the aesthetically ideal unit of time, but because audiences had to remember when their favorite shows were on. A show that starts at

7:51 and goes on until 8:47 is at a considerable disadvantage to a show that starts at 8:00 and goes till 9:00, and that disadvantage is entirely cognitive—the odd times are simply harder to remember. (It's hard to have appointment TV if you can't recall when the appointment is.) The length and time slots of television had nothing to do with video as a medium and everything to do with the need to aid the viewer's memory. Similarly, everything from *TV Guide* to the rise of content-specific channels on cable like MTV and the Cartoon Network were responses to the problem of helping viewers find their way to interesting material.

Traditional media have a few built-in constraints that make the filtering problem relatively simple. Most important, publishing and broadcasting cost money. Any cost creates some sort of barrier, and the high cost of most traditional media creates high barriers. As a result, there is an upper limit to the number of books, or television shows, or movies that can exist. Simply to remain viable, anyone producing traditional media has to decide what to produce and what not to; the good work has to be sorted from the mediocre in advance of publication. Since the basic economics of publishing puts a cap on the overall volume of content, it also forces every publisher or producer to filter the material in advance.

Though the filtering of the good from the mediocre starts as an economic imperative, the public enjoys the value of that filtering as well, because we have historically relied on the publisher's judgment to help ensure minimum standards of quality. Where publishing is hard and expensive,

every instance of the written word comes with an implicit promise: someone besides the writer thought this was worth reading. Every book and magazine article and newspaper (as well as every published photo and every bit of broadcast speech or song or bit of video) had to pass through some editorial judgment. You can see this kind of filtering at work whenever someone is referred to as a “published author.” The label is a way of assuring people that some external filter has been applied to the work. (The converse of this effect explains our skepticism about self-published books and the label reserved for publishers who print such books—the vanity press.)

The old ways of filtering were neither universal nor ideal; they were simply good for the technology of the day, and reasonably effective. We were used to them, and now we have to get used to other ways of solving the same problem. Mass amateurization has created a filtering problem vastly larger than we had with traditional media, so much larger, in fact, that many of the old solutions are simply broken. The brute economic logic of allowing anyone to create anything and make it available to anyone creates such a staggering volume of new material, every day, that no group of professionals will be adequate to filter the material. Mass amateurization of publishing makes mass amateurization of filtering a forced move. Filter-then-publish, whatever its advantages, rested on a scarcity of media that is a thing of the past. The expansion of social media means that the only working system is publish-then-filter.

We have lost the clean distinctions between communications media and broadcast media. As social media like MySpace

now scale effortlessly between a community of a few and an audience of a few million, the old habit of treating communications tools like the phone differently from broadcast tools like television no longer makes sense. The two patterns shade into each other, and now small group communications and large broadcast outlets all exist as part of a single interconnected ecosystem. This change is the principal source of “user-generated content.” Users—people—have always talked to one another, incessantly and at great length. It’s just that the user-to-user messages were kept separate from older media, like TV and newspapers.

The activities of the amateur creators are self-reinforcing. If people can share their work in an environment where they can also converse with one another, they will begin talking about the things they have shared. As the author and activist Cory Doctorow puts it, “Conversation is king. Content is just something to talk about.” The conversation that forms around shared photos, videos, weblog posts, and the like is often about how to do it better next time—how to be a better photographer or a better writer or a better programmer. The goal of getting better at something is different from the goal of being good at it; there is a pleasure in improving your abilities even if that doesn’t translate into absolute perfection. (As William S. Burroughs, the Beat author, once put it, “If a thing is worth doing, it’s worth doing badly.”) On Flickr, many users create “high dynamic range” photos (HDR), where three exposures of the same shot are combined. The resulting photos are often quite striking, as they have a bigger range of contrast—the brights are brighter and the darks are darker—than any of the individual source photos. Prior to photo-sharing services, anyone looking at such

a photo could wonder aloud, “How did they do that?” With photo sharing, every picture is a potential site for social interaction, and viewers can and do ask the question directly, “How did you do that?,” with a real hope of getting an answer. The conversations attached to these photos are often long and detailed, offering tutorials and advice on the best tools and techniques for creating HDR photos. This form of communication is what the sociologist Etienne Wenger calls a community of practice, a group of people who converse about some shared task in order to get better at it.

John Seely Brown and Paul Duguid, in their book *The Social Life of Information*, put the dilemma this way: “What if HP [Hewlett-Packard] knew what HP knows?” They had observed that the sum of the individual minds at HP had much more information than the company had access to, even though it was allowed to direct the efforts of those employees. Brown and Duguid documented ways in which employees do better at sharing information with one another directly than when they go through official channels. They noticed that supposedly autonomous Xerox repair people were gathering at a local breakfast spot and trading tips about certain kinds of repairs, thus educating one another in the lore not covered by the manuals. Without any official support, the repair people had formed a community of practice. Seeing this phenomenon, Brown convinced Xerox to give the repair staff walkie-talkies, so they could continue that sort of communication during the day.

By lowering transaction costs, social tools provide a platform for communities of practice. The walkie-talkies make

asking and answering “How did you do that?” questions easy. They would seem to transfer the burden from the asker to the answerer, but they also raise the answerer’s status in the community. By providing an opportunity for the visible display of expertise or talent, the public asking of questions creates a motivation to answer in public as well, and that answer, once perfected, persists even if both the original asker and the answerer lose interest. Communities of practice are inherently cooperative, and are beautifully supported by social tools, because that is exactly the kind of community whose members can recruit one another or allow themselves to be found by interested searchers. They can thrive and even grow to enormous size without advertising their existence in public. On Flickr alone there are thousands of groups dedicated to exploring and perfecting certain kinds of photos: landscape and portraiture, of course, but also photos featuring the color red, or those composed of a square photo perfectly framing a circle, or photos of tiny animals clinging to human fingers.

There are thousands of examples of communities of practice. The Web company Yahoo hosts thousands of mailing lists, many of them devoted to advancing the practice of everything from Creole cooking to designing radio-controlled sailboats. Gaia Online is a community for teenage fans of anime and manga, the Japanese animation and cartoon forms; their discussion groups include long threads devoted to critiquing one another’s work and tutorials on the arcana of the form, like how to draw girls with really big eyes. Albino Blacksheep is a community for programmers working on in-

teractive games and animation. All these groups offer the kind of advice, feedback, and encouragement that characterizes communities of practice. These communities can be huge—Gaia Online has millions of users. For most of the history of the internet, online groups were smaller than traditional audiences—big-city newspapers and national TV shows reached more people than communal offerings. Now, though, with a billion people online and more on the way, it's easy and cheap to get the attention of a million people or, more important, to help those people get one another's attention. In traditional media we know the names of most of the newspapers that have more than a million readers, because they have to appeal to such a general audience, but sites like Albino Blacksheep and Gaia Online occupy the odd and new category of meganiches—nichelike in their appeal to a very particular audience, but with a number of participants previously available only to mainstream media.

Every webpage is a latent community. Each page collects the attention of people interested in its contents, and those people might well be interested in conversing with one another, too. In almost all cases the community will remain latent, either because the potential ties are too weak (any two users of Google are not likely to have much else in common) or because the people looking at the page are separated by too wide a gulf of time, and so on. But things like the comments section on Flickr allow those people who do want to activate otherwise-latent groups to at least try it. The basic question “How did you do that?” seems like a simple request for a transfer of information, but when it takes place

out in public, it is also a spur to such communities of practice, bridging the former gap between publishing and conversation.

Though some people participate in communities of practice for the positive effects on their employability, within the community they operate with different, nonfinancial motives. Love has profound effects on small groups of people—it helps explain why we treat our family and friends as we do—but its scope is local and limited. We feed our friends, care for our children, and delight in the company of loved ones, all for reasons and in ways that are impossible to explain using the language of getting and spending. But large-scale and long-term effort require that someone draw a salary. Even philanthropy exhibits this property; the givers can be motivated by a desire to do the right thing, but the recipient, whether the Red Cross or the Metropolitan Opera, has to have a large staff to direct those donations toward the desired effect. Life teaches us that motivations other than getting paid aren't enough to add up to serious work.

And now we have to unlearn that lesson, because it is less true with each passing year. People now have access to myriad tools that let them share writing, images, video—any form of expressive content, in fact—and use that sharing as an anchor for community and cooperation. The twentieth century, with the spread of radio and television, was the broadcast century. The normal pattern for media was that they were created by a small group of professionals and then delivered to a large group of consumers. But media, in the word's literal sense as the middle layer between people, have always been a three-

part affair. People like to consume media, of course, but they also like to produce it (“Look what I made!”) and they like to share it (“Look what I found!”). Because we now have media that support both making and sharing, as well as consuming, those capabilities are reappearing, after a century mainly given over to consumption. We are used to a world where little things happen for love and big things happen for money. Love motivates people to bake a cake and money motivates people to make an encyclopedia. Now, though, we can do big things for love.

Revolution and Coevolution

There’s a story in my family about my parents’ first date. My father, wanting to impress my mother, decided to take her to a drive-in movie. Lacking anything to drive in to the drive-in, however, he had to borrow his father’s car. Once they were at the movie, my mother, wanting to impress my father, ordered the most sophisticated drink available, which was a root beer float. Now my mother hates root beer, always has, and after imbibing it, she proceeded to throw up on the floor of my grandfather’s car. My father had to drive her home, missing the movie he’d driven fifteen miles and paid a dollar to see. Then he had to clean the car and return it with an explanation and an apology. (There was, fortunately for me, a second date.)

Now, what part of that story is about the internal combustion engine? None of it, in any obvious way, but all of it, in

another way. No engine, no cars. No cars, no using cars for dates. (The effect of automobiles on romance would be hard to overstate.) No dates in cars, no drive-in movies. And so on. Our life is so permeated with the automotive that we understand immediately how my father must have felt when my grandfather let him borrow the car, and how carefully he must have cleaned it before returning it, without thinking about internal combustion at all.

This pattern of coevolution of technology and society is true of communications tools as well. Here’s a tech history question: which went mainstream first, the fax or the Web? People over thirty-five have a hard time understanding why you’d even ask—the fax machine obviously predates the Web for general adoption. Here’s another: which went mainstream first, the radio or the telephone? The same people often have to think about this question, even though the practical demonstration of radio came almost two decades after that of the telephone, a larger gap than separated the fax and the Web. We have to think about radio and television because for everyone alive today, those two technologies have always existed. And for college students today, that is true of the fax and the Web. Communications tools don’t get socially interesting until they get technologically boring. The invention of a tool doesn’t create change; it has to have been around long enough that most of society is using it. It’s when a technology becomes normal, then ubiquitous, and finally so pervasive as to be invisible, that the really profound changes happen, and for young people today, our new social tools have passed normal and are heading to ubiquitous, and invisible is coming.

We are living in the middle of the largest increase in expressive capability in the history of the human race. More people can communicate more things to more people than has ever been possible in the past, and the size and speed of this increase, from under one million participants to over one billion in a generation, makes the change unprecedented, even considered against the background of previous revolutions in communications tools. The truly dramatic changes in such tools can be counted on the fingers of one hand: the printing press and movable type (considered as one long period of innovation); the telegraph and telephone; recorded content (music, then movies); and finally the harnessing of radio signals (for broadcasting radio and TV). None of these examples was a simple improvement, which is to say a better way of doing what a society already did. Instead, each was a real break with the continuity of the past, because any radical change in our ability to communicate with one another changes society. A culture with printing presses is a different *kind* of culture from one that doesn't have them.

There was a persistent imbalance in these earlier changes, however. The telephone, the technological revolution that put the most expressive power in the hands of the individual, didn't create an audience; telephones were designed for conversation. Meanwhile the printing press and recorded and broadcast media created huge audiences but left control of the media in the hands of a small group of professionals. As mobile phones and the internet both spread and merge, we now have a platform that creates both expressive power and audience size. Every new user is a potential creator and consumer, and an audience whose members can cooperate directly with

one another, many to many, is a former audience. Even if what the audience creates is nothing more than a few text messages or e-mails, those messages can be addressed not just to individuals but to groups, and they can be copied and forwarded endlessly.

Our social tools are not an improvement to modern society; they are a challenge to it. New technology makes new things possible: put another way, when new technology appears, previously impossible things start occurring. If enough of those impossible things are important and happen in a bundle, quickly, the change becomes a revolution.

The hallmark of revolution is that the goals of the revolutionaries cannot be contained by the institutional structure of the existing society. As a result, either the revolutionaries are put down, or some of those institutions are altered, replaced, or destroyed. We are plainly witnessing a restructuring of the media businesses, but their suffering isn't unique, it's prophetic. All businesses are media businesses, because whatever else they do, all businesses rely on the managing of information for two audiences—employees and the world. The increase in the power of both individuals and groups, outside traditional organizational structures, is unprecedented. Many institutions we rely on today will not survive this change without significant alteration, and the more an institution or industry relies on information as its core product, the greater and more complete the change will be. The linking of symmetrical participation and amateur production makes this period of change remarkable. Symmetrical participation means that once people have the capacity to receive information, they have the capability to send it as well. Owning a television

does not give you the ability to make TV shows, but owning a computer means that you can create as well as receive many kinds of content, from the written word through sound and images. Amateur production, the result of all this new capability, means that the category of “consumer” is now a temporary behavior rather than a permanent identity.

CHAPTER 5

PERSONAL MOTIVATION MEETS COLLABORATIVE PRODUCTION

Collaborative production, where people have to coordinate with one another to get anything done, is considerably harder than simple sharing, but the results can be more profound. New tools allow large groups to collaborate, by taking advantage of nonfinancial motivations and by allowing for wildly differing levels of contribution.

Perhaps the most famous example of distributed collaboration today is Wikipedia, the collaboratively created encyclopedia that has become one of the most visited websites in the world. Jimmy Wales and Larry Sanger founded Wikipedia in 2001 as an experimental offshoot of their original idea, a free online encyclopedia of high quality called Nupedia. Nupedia was to be written, reviewed, and managed by experts volunteering their time. Wales had had a taste of collaboratively produced work while running Bomis, an internet company he'd helped found in 1996. Bomis was in the business