



ALEX GALLOWAY

INTERVIEW BY GARNET HERTZ

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Hertz: In your opinion, what do you see as being wrong with the maker movement?

Galloway: There are a lot of things right with the maker movement, certainly we can talk about that. However, I may have slightly a polemical position on this. You could view the maker movement as the last period of a very long sentence, therefore very not so surprising even if it brings a certain kind of shift in our culture and technology. That larger transformation has to do with how modern society has shifted since, let's say the early 1970s, and really started to shine the spotlight on individuals and turned individuals into makers, in a much broader sense. Our society today is founded on a production that originates from individuals, from their own expression, from their own presentation, from their own performance and self promotion. A production through affect, and behavior, and comportment. We are all makers of our own presence in the world, and we can think of this as a new productive capacity, as a lot of economists do. What's the similarity between Facebook and the explosion of the TED talks phenomenon or the way video games are designed these days, or even in something like the explosion of the memoir in literature? These all show different facets of the same larger social phenomenon, which is that we now focus a lot of energy on the elevation of the individual's productive capacity, its performative expressive capacity. This would be a way to connect Joan Didion with Diablo 3. Maybe there's a new kind of narcissism in this culture that we are going to have to contend with, so Facebook as a narcissistic machine. We are all makers of things. If we were

to evaluate what is wrong with the maker movement, I think we cannot simply limit it to just this isolated movement, we need to think much more generally about things like Web 2.0. Basically, everyone is a maker.

So you don't view the maker movement as reverting back to handmade craft and self-sufficiency, like what was more popular in material culture maybe a hundred years ago, as in homesteading culture?

I think that's happening. We're a really rich country, in the US, but at the same time, we are completely impoverished. We're completely impoverished in our minds, in our bodies. That is why you see a turn now, as there is periodically in modern life, back to a more authentic or sincere way of living. So enter a new authentic hacker ethos where people are building things. Look at the 1980s and the explosion of punk rock and indie punk labels. That was a similar kind of instinct. Today, everyone is a maker, but no one is really making anything. We have this sense of universality, but I'm not sure we really fulfill the promise of collectivity.

I see a thread in DIY culture as gesturing toward what people were doing a hundred years ago – at least in terms of being self-sufficient and getting around commercial culture. However, what I see in the Make Magazine brand of making usually involve building things with Arduinos, making LEDs light up, and using 3D printers – in

some ways, this seems like just of another style of consumer.

A lot of people are interested in the idea of the so called pro-consumer. So a consumer who is also productive and is obligated to be productive. As you're hinting, this has a long history in American and commercial life. A hundred years ago, furniture designers, like Stickley, would send you things that you would have to assemble yourself. They were outsourcing part of the assembly labor to the consumer. The larger craftsman movement also connects with what you're talking about with the DIY culture. Maybe it's very American too. We have this myth, this Emersonian myth of self-reliance and the Protestant ethic and the spirit of capitalism: pull yourself up by your bootstraps, be self sufficient. I actually love all of that; I am definitely seduced by self sufficiency and can see the appeal.

Right. Something that was brought up to me by Natalie Jeremijenko was this idea of open source licenses replacing or standing in for the idea of being critical or thoughtful. We had talked about it in terms of people saying "Well here's my gizmo, here's my gadget and it's open source so that means that I'm critically engaging with culture." Do you have any thoughts on open source hardware, or how it's been developing over the last little while?

Open source is a tricky subject. On the one hand, we should acknowledge that open source software is hands down one of the single most important things that had happened in our time. The idea that one of the largest corporations on the planet – like Microsoft, for example – could actually be threatened by a completely self-organizing, open source project. Sometimes not simply threatened, sometimes completely bested – look at the Apache server and its deep penetration in the server market. For example, imagine if there were an all volunteer, open source, non-commercial airplane project that was threatening Boeing. It just makes no sense. We have to acknowledge that, as a chapter in industrial history, open source software is tremendously important.

But I think that I can sympathize with what you're getting at. Simply to stamp something as open source is not at all sufficient for qualifying it as a critical project or a project that has some kind of progressive or political sensibility. Not at all. In this day and age we need to be cautious. We need to ask ourselves who wants the world to be open source? Google wants the world to be open source. Facebook wants the world to be open source. There are whole new production models and ways in which value can be produced based on opening things. It could be opening up your own life, opening up your social network, or in the case of Google, opening up vast reservoirs of untapped data. So it's a double edged sword. We need to do more granular analysis of each individual case.

Are you aware of this DARPA grant that O'Reilly and Make recently received, and what do you think of it? Is it inevitable that DIY or hobbyist type of cultures align with larger institutions, or do you see this as going against some of what Make had started... or is it actually following in line with what they were always doing?

I don't think there is any surprise there. We should remember that DARPA has been funding this since the very beginning, have no illusions about it. At the same time, I don't want to be a hypocrite. O'Reilly code books are the best in the business – everyone knows that. I first learned how to code perl using that blue camel book, and I learned what TCP/IP is through O'Reilly books. I think everyone loves how they don't really pander or patronize the reader. Yet the DARPA funding issue is no surprise. The deeper question is, what are the politics of hacking, or what are the politics of coders. That's a much more difficult question and there aren't any easy answers to that.

I get a lot of flack when I say this, but I honestly think that hackers tend to be either politically naïve or politically neutral. They are simply uninterested in politics a lot of the time. Anonymous gets a lot of press, but most coders and hackers do what they do because they are into code, not politics. They want to make cool stuff. Thus they tend to be scattered across the political spectrum. In fact, when they're on the

left, they tend to be centrist liberals, or sometimes left libertarians. Only a minority of hackers are what we might call left progressives in the traditional sense. You could read any number of things from Fred Turner and others about the way in which, historically, lets say over the last fifty years, how the rise of cybernetics and the rise of new media is essentially coterminous with the rise of the new technocratic, neo-liberal, global systems of government. So DARPA and O'Reilly is not very surprising if you look at deeper trends.

Sure. On that front an initiative that DARPA, and Make through DARPA, is developing is a hackerspace-style proliferation through schools. There's a goal of having a thousand spaces set up over the next several years. Related to this, what role do you see hackerspaces having within a university? Have you been involved in any spaces like this, or how do you see this kind of thing being put into universities?

That is kind of tricky. I maybe have an unpopular angle on this too. We have to remember that after the church, the university is the most conservative institution in society. And I'm not sure that's a bad thing [laughter]. I think there is a reason why universities are traditional and conservative. Certainly I am all for certain kinds of deconstructions of the university system and its staid organization, for example with the canon wars in the '80s and '90s and the quest to diversify the canon. But I'm also a person who teaches classes and says, "no devices in class. No laptops, no devices."

The problem is that often this hack-ification of the university really is a disguise for a neo-liberal makeover of the university. Ideas like "Let's turn seminars into laboratories for entrepreneurship" – I don't think that's a good idea. I'm not against entrepreneurship, but I don't think that, outside of business school, this is what universities are for, particularly the liberal arts and humanities parts of the university. I think I'm quite traditional and conservative on that point. Having said that, I also would add that, to be a person in modern life today, I think one should know one foreign language and one computer language. So let's

learn how to code, but let's also read Plato and maybe ultimately try to bring these domains together.

Can you comment on the idea of the difference between critical work that you do and critical theory as defined by the Frankfurt School? What I'm getting at here is more of an idea of the term critical making, whether that's a valuable term, or it's maybe too academic or maybe too negative or maybe should be updated into something else. Do you have any ideas about the term critical making and whether that's a good label to embrace, or is it maybe better to think around different terms?

I think "critical" is a good term. Like a lot of labels, it can be vacuous sometimes and, certainly, it can turn into a certain brand. I use the word critical to describe the kinds of projects I aspire to – whether that be the critical study of software, or an interest in tactical media, or the politics of code.

We can look at the origins of critique. There's basically two origins for this word. There's the one that comes from Kant and the one that comes from Marx. If you read Kant, the idea of critique has to do with the rejection of dogma. An antidogmatic interest in self knowledge, the self reflective quality of knowledge: the ability for knowledge to be able to do what it needs to do without appeal to external scaffolding (in, for example, an appeal to dogma). Kant's legacy has colored our entire modern experience.

At the same time, there exists a similar but slightly different sense of critique that comes from Marx. This also concerns the antidogmatic, self-reflective, modern position. His is a rather mundane, terrestrial, and non-transcendental position. But of course in Marx, it's all driven by a kind of polemic; it's driven by an antagonism. A dialectical relation, where you are always in contradiction with something.

Marx's sense of critique is about taking a position. Consider something like Wikipedia. Wikipedia would be an instance of the opposite path – there's not one sentence of critique on Wikipedia.

This is because of the principle of neutrality that guides all writing on Wikipedia. They have very specific editorial guidelines that prohibit what we know as critique, and for good reason. Critique means you have to take a position, you have to defend it, you have to be against something. There has to be a dynamic or differential. So to answer your question I am definitely interested in the legacy of Frankfurt school critical theory and I don't see a dramatic shift in that kind of methodology or approach. Part of what I am trying to do is take that legacy of critical theory (while adding bits from continental philosophy) and try to see if and how and whether they connect to contemporary questions, particularly ones having to do with digital media.

What useful things can be taken from the concept of critical design as established by Anthony Dunne and Fiona Raby?

Critical Design is a bit silly. Designers have always been great at branding, and this is no exception. Design is a fundamentally critical process, from the get go. That's what the design process means: it's an iterative process in which you revisit ideas, refashion them, recalibrate, and produce multiple versions. That's why people say "everyone is a designer" today. We live in the age when everyone is a curator, everyone is a DJ, everyone is a designer. We need to take seriously the notion that whereas a generation ago critique was more or less outside mainstream life, today critique is absolutely coterminous with the mainstream: this is why one day a designer is doing a so-called critical design project, and the next day they're doing a project for IKEA. It is normal.

For maker or DIY culture, what are some interesting projects, groups, directions, themes or trends that you've seen lately. Is there anything you've recently seen that has been unexpectedly provocative or interesting?

Well, I've tried to keep up, but I'll admit I'm not a hardware guy. I'm not a physical computing guy, so I've never been able to participate in some of the really interesting spurs that have come up recently like 3D printing, and microchip coding and Arduino and things like that.

In terms of interesting projects, I guess for me the holy grail is still ad hoc networking. Once we have truly viable ad hoc networking, rolled out to a significant number of machines and mobile devices, at that point, we will see a major shift in technology and modes of sociability. Imagine if the Occupy Movement was not a quote-unquote "Twitter revolution" (which is such a problematic claim to begin with!), but imagine if it was completely ad hoc, imagine if the network itself was local and ad hoc. Things would be very different. That's one thing I find quite interesting. I think it will have the kind of dramatic shift that we saw, let's say, in the way in which something like BitTorrent really changed file transfer.

That doesn't answer your question directly, but I think that it may be a part of DIY. I think it is, since it embodies the spirit of a bottom up, grassroots movement. We don't need a backbone. We don't need an information backbone. With an ad hoc network, just by turning on a device, we fortify the backbone, the grassroots network.

Yes, and I'm glad you brought up the Occupy Movement because it's something that's been an interesting contrast to the apolitical and family friendly tone of Make Magazine. Many interesting things have happened in what could be termed as DIY culture through the Occupy Movement and other things that are screaming politics or controversy. It just seems a bit odd to think of DIY culture as being apolitical, and there are some documents, some vision statements that Make has put out that defines the maker movement as non-political... and I think it's sort of taking the hacking component away. It is extracting the making component out of hacking or taking the hacking part of the hacker ethic away from making and it's sanitizing it. It's not quite Disney-fying it, but it is making it family friendly, which I think has really been, in some ways, maybe key to its spreading, and may be essential to being taken up in a popular way. But also it sort of loses a lot of that punk aesthetic and hacker aesthetic that I think is so rich and interesting.

I think you're onto something. One could do a whole historical sociology of aesthetic and political techniques, let's say from the 1960s, and the way in which they constituted genuine counterculture, even antisocial behavior, critical of the mainstream and so on. Then, one could trace these techniques and show how (or if) what was once more radical or countercultural has become normalized. Or even how certain techniques may have been co-opted to play for the other side.

Sure, I think a good source on that is Rachel Maines' work... I don't know if you've read it. She talks about it in terms of the hedonization of technologies and of practices that once were labor oriented and the process of how they transform into a pleasure-oriented leisure activity.

Think about the status of desire. In the 1970s Deleuze and Guattari talk about desire as a radically liberating capacity – the situationist international too. But now think about how Facebook works today. It is completely embedded in the mode of production now – activity, affectivity, performativity. If you read Judith Butler in the early 1990s, it's a radical position to take, but now it is completely sewn into the Facebook business model. So a lot of things have changed in the last twenty, thirty years or more.

Think about interactivity. If you talked about interactive media, let's say in the late 1960s, you were a radical, because interactivity meant that media should be bi-directional, it meant that it was not a broadcast model. Media should be bi-directional; if you were talking about interactivity essentially you were for the people. Now interactivity is, at best, completely normal, and at worst, maybe even slightly nefarious. I'm not sure I want Google to be interacting with me when I don't want them to be interacting with me. I'm not sure I want Gmail to be interacting with the emails I write.

In fact one could say the same thing about remix culture. I was looking recently at some early experimental film and video projects. And they are so surprisingly similar to watching an MTV bumper from the 1980s. It's exactly the same technique, hyper quick edits, and so on. Such are

the strange twists and turns of history. At one moment something is marginal, critical, even antisocial, and then a generation later it becomes normal or mainstream.

So what are your thoughts about contemporary use of the term DIY, whether that's through Mark Fraeunfelder, Matthew Crawford, or other people. Do you have any thoughts on how that term has changed, or where it's at now, or where it comes from? Because when you say "DIY" it can mean everything from going to Home Depot to buy lumber to programming an Arduino or a whole range of things. Where do you think is the most useful way to take that term, where to go with it or what to do with it?

Here in New York rooftop gardens are all the rage. We have so many rooftops and they're all empty. My parents were back-to-the-landers in the 1970s, and I grew up on a farm in Oregon. So I'm a product of the DIY ethos to a certain extent. I'd love to have a chicken coop again in my backyard if I could!

As I said before, I think we're a really rich country but we're impoverished at the same time, because even in our making, we've lost the essence of making. It could be physical knowledge, or it could be spiritual knowledge. You mentioned Crawford, and we could discuss others (Richard Sennett's book on the craftsman, and so on). In continental philosophy right now people are talking about carpentry – I kid you not. Tools are very fashionable right now. We mentioned Etsy. Even in music you see a return to the DIY hand-made ethos. Ten, twenty years ago, it used to be the height of cool to be on a small label like Sub Pop. Today it's even cooler to self-release.

Right, or on cassette or vinyl, too... to self-release on vinyl.

Right, I find that kind of humorous. We're seeing it in all aspects of culture, and of course it's still generally a good thing, whether it's in music or with Linux or Occupy. These are good developments. But we should also frame them

within a larger landscape. Romanticism never gets old for people; there's a basic phenomenology that people never lose interest in. What I mean is that people will always crave a sense of authenticity, a sense of sincere presence in the world. When our social relations fray and become alienated and commodified, we will see people return to what they view as a more authentic, sincere existence. It started with Socrates and it's happened periodically ever since. Phenomenology and romanticism are maybe only the most recent emblems. I think that's a way of framing what you're getting at with your question here about a return to the handmade, maintaining a personal relationship to one's objects and, as those objects disseminate, a personal more sincere social relationship to one's friends and relations. I'm a woodworker; I make furniture in my spare time, so I get why people feel this way.

I see part of it as people, in a simple way, just being tired of buying stuff at Wal-Mart and being sort of sick of that. They're returning to using – for example – some hand carved spoon that their grandfather made or a quilt. And I think that it's very difficult to replicate that genuine sort of hand made, or sentimental type of object that you'd have in handmade culture.

You mean, if it's computer based?

Well, that's a good question as to whether that could be computer based. I think you see some replication of sentimentality in software through things like Instagram, which adds sentimentality through software. Physical objects do have a weight to them that is maybe more difficult to replace through software.

Media always play that role. We often think of media in negative terms: "Oh, these are the aspects of modern life that are impersonal." But look at what media do and how they work. I am thinking of something like the invention of anti-aliasing. The invention of anti-aliasing was precisely to add a soft, authentic, smooth visuality to images. You could even look in the reverse, because the flipside to romanticism is a naïve

sentimentality or nostalgia. That's a trap: romanticism is an ideology in itself, of course, we should acknowledge that. But I love these small nostalgias that appear here and there. People are nostalgic now for the CD as a music format because MP3s tend to be compressed and CDs have a richer, deeper, sonic spectrum. People are nostalgic for – as you mentioned – vinyl, or the pops and hisses that you hear when you drop the needle on a record. Such media artifacts return as the telltale signs of a more immediate authentic experience.

Right. So if you had to spit out some sources for a reading list related to either Do It Yourself Culture or making or maybe critical making or handmade craft, what would it be? You mentioned Sennett and Crawford and some other sources. What would you add to that list, or what would you think would be good for people to dig into?

Wow, well there's all the old hippie literature from the back to the land movement. How to build a house by yourself, books on goat husbandry, and so on.

...and you still see herds of goat in Los Angeles, clearing brush for fire codes. You can drive down the freeway and see people who are still "husbanding" goats...

[Laughter] Related to the idea of phenomenology, a favorite of mine is the architect Christopher Alexander. In terms of the immediacy of production and design, Alexander is a legendary figure. But more contemporary, my hero is Geert Lovink – and I'm sure a big influence on you too. Especially that early book of his called *Media Archive*, that he co-wrote under the pseudonym Adilkno. He's been writing on this stuff for a very long time and has been thinking about critical media practice more deeply and with greater subtlety than anyone I can think of. What's so great about his work is that he doesn't fall into the two typical camps. Either people are geeks who are into hacking, and their response is generally thumbs up; or people are knee-deep in the proprietary commercial world and give it a thumbs down (when it threatens their profit

margin). But someone like Lovink – or even consider Matthew Fuller's work, or Tiziana Terranova, or certainly the Critical Art Ensemble – is a huge influence to a lot of us these days. That kind of work remains absolutely crucial for me.

Another book that gets better and better every time I read it is McKenzie Wark's book *A Hacker Manifesto*, a text influenced significantly by Guy Debord and Deleuze. I think it's one of the very few good books on digital media and the world of digital culture. It's one of the handful of books that really stands up since the web boom of the late 1990s.

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