"All space will be public space"

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[2 CLICK TO "All space will be public space"] All space will be **public** space. We will be living our private lives in public.

Is this an exaggeration? **[3 CLICK TO "Public space?"]** Of course. So is saying that the cost of computing and communications are zero. But, they are so close -- and getting closer so fast -- that for large design and policy questions it's more helpful to just assume computing and communications cost zero. I claim the same here: for thinking about big social, design and policy questions in the future, we should simply assume that all space will be public space. **[4 CLICK TO CIRCLE WITH PHOTOS]**

SECTION: "Public space?"

[5 CLICK TO CCTV] CCTV is becoming ubiquitous. High resolution satellites and Google Street View show you my patio and my front yard. **[6 CLICK TO Google images]** News reporting is instant; **[7 CLICK TO "News, news, news"]** the cycle is 24x7. Blogging has unleashed thousands of micro-topic investigative journalists. **[8 CLICK TO MANY CAMERA PHONES]** Everyone carries a high-def still and video camera in their pocket (cell phone), with instant publishing to the Internet. These are technologies that make private life public, whether we like it or not.

But the big deal **[9 CLICK TO LOGO CLOUD – TINY!]** is the social media revolution. The social media technologies enable the explosion in social networking (behavior). With these technologies we are **volunteering** to live out our lives in public.

In 1999 Josh Harris wired his apartment with about 30 cameras that broadcast his life with his girlfriend. **[10 CLICK TO "WE LIVE IN PUBLIC"]** His whole life: eating, sleeping, defecating, making love. Within a few years, reality shows dominate broadcast TV.   And now we write our own reality

shows, announcing when we break up with a boyfriend on Facebook, or **[11 CLICK TO LAST NIGHT'S PARTY]** sharing last night's party fun on a photo site.

Perhaps you like to tweet your bladder status. **[12 CLICK TO #TMI TWEETS]**.

[13 CLICK TO TOM'S FOURSQUARE HISTORY] Or announce your current location to the world with Foursquare or Gowalla, or Google or Facebook. On Dopplr and Tripit people publish their travel plans.

SECTION: Social networking important?

[14 CLICK TO Social Networking FRAME] Is social networking important, **[15 CLICK TO "Social networking important?"]** or just the current hype?

[16 CLICK TO WORD CLOUD] Clear evidence that it is having a profound effect on our culture is the proliferation of new words and meanings in the past decade.

If Facebook were a country **[17 CLICK TO POPULATION TABLE]** …it would be the third largest.

Today, 30% of couples meet online. In 2009, 1 in 8 marriages began online.[1] **[18 CLICK TO DATING WEB SITES]**

[19 CLICK TO TWITTER] Twitter averages 40 million tweets per day[2]

[20 CLICK TO FLICKR] People upload 5500 new photos to Flickr every minute.[3]

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[1] Source: McKinsey Study, via Eric Qualman, "Social Media Revolution 2 (Refresh)", 10 May 2010, http://socialnomics.net/2010/05/05/social-media-revolution-2-refresh/.

[2] As of December 2009. After giving this talk on 24 Sept 2010, I discovered that Twitter has released recent data, showing that traffic is up to 95 million tweets per day in September 2010.

[3] Flickr reports uploads in the previous minute at http://www.flickr.com/photos/. I've lost track of where I obtained this particular calculation of the average, but it is consistent with several published calculations that can be found by searching the web for "flickr uploads per minute".

[21 CLICK TO "HOW FAST"?] How fast is it growing?

- Time to reach 50 million users[4]

    - **[22 CLICK TO RADIO / TV / iPod]** Radio: 38 yrs

    - TV: 13 yrs

    - iPod: 3 yrs

- **[23 CLICK TO FACEBOOK GROWTH] Facebook added 200 million users in < 1 year**![5]

SECTION: SOCIAL MEDIA DYING?

[23a CLICK TO BLANK] Are today's social media the future of technology? No. Today's tools are already in their senescence. Yet **the social networking** they brought us is written into our cultural DNA. **This is my story**: Tomorrow's social technology is written for us by today's living private in public.

Today's social media are dying? **[24 CLICK to "Social Media Dying?"]** How can I claim that? The short answer: our information technology tools are being remade every 10-20 years. And we generally suck at predicting the next revolution.

Before Carterphone overcame ATT in a regulatory proceeding in 1968,[6] **[25 CLICK TO BLACK PHONE]** only ATT could make phones to attach to the network. Few foresaw everyone with an iPhone or Android in their pocket.

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[4] United Nations, "Cyberschoolbus", ch. 20 ("Information and Communications Technology), http://www.un.org/cyberschoolbus/briefing/technology/tech.pdf.
[5] Facebook Timeline, http://www.facebook.com/press/info.php?timeline, (Feb 2009 to Feb 2010: 175 million to 400 million users).
[6] "In the matter of the use of the Carterphone device", U.S. Federal Communications Commission, 13 F.C.C.2d 420 (1968), available from http://www.uiowa.edu/~cyberlaw/FCCOps/1968/13F2-420.html.

At the dawn of the PC age in 1976 or so, most could not foresee the Web (yes, we know that Vannevar Bush did,[7] but in a vague, unheralded way that was recognized mostly in hindsight).

At the dawn of the Web age in 1994 or so (remember Mosaic?), most could not foresee social media / networking.

Plenty of folks are happy to guess about the next big thing: they'll mostly be wrong.   But we do know that each information and communication **technology** revolution has had a finite life.

- **[26 CLICK TO iPHONE]** The "phone" now is just another app on a handheld device – and becoming one of the less important

- The desktop PC is dying, **[27 CLICK TO LAPTOP WITH CAT]** replaced by laptops and thin clients

- Laptops are dying, replaced by cell phones and iPads

- Wired magazine recently pointed out that the Web itself is dead[8], **[28 CLICK TO WIRED]** accounting for only 23% of Internet traffic (and increasingly replaced by separate apps) **[29 CLICK TO BLANK SPACE]**

- So yes, very soon what we think of today as social media will be dead. By the end of 2008 teen use of email had dropped from 89% to 73%, with more reliance on texting. And now more teens engage in online social gaming than use social websites.[9]

- "But all of my friends are joining Facebook!" Sorry: this won't be the first time that adults are behind the kids. **[30 CLICK TO "1999"]**

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[7] "As We May Think", *The Atlantic*, July 1945, available from http://www.theatlantic.com/magazine/archive/1969/12/as-we-may-think/3881/.
[8] Chris Anderson, "The Web is Dead", *Wired*, 17 Aug 2010, available from http://www.wired.com/magazine/2010/08/ff_webrip_debate/.
[9] Source: "Young People Abandoning Email and TV", AccuraCast, citing The Pew Internet and American Life Project studies, 4 Feb 2009, http://www.accuracast.com/search-daily-news/social-media-7471/young-people-abandoning-email-and-tv/.

Think back to 1999: "everyone" was on AOL them, or used AIM instant messaging. **[31 CLICK TO "AOL"]** Remember? AOL?[10]

Yes, social media as we know it today will soon be in its death throes, like each of these other technologies. But each has had direct, long-term impact on culture and society, and thus prepared the ground for the next revolution. Social networking is written into our cultural DNA. It is the future, today. All space will be public space.

SECTION: WHAT IS IT ABOUT SOCIAL NETWORKING THAT MAKES SPACE PUBLIC?

[32 CLICK "Social networking → All space public"] Why is social networking making all space public space? danah boyd identifies four features that distinguish networked publics:

1. **[33 CLICK TO "persistence"] persistence**: what we share today, all else equal, will be available tomorrow…and next decade

2. **[34 CLICK TO "searchability"] searchability**: it is often easy to find our digital traces. For example I searched Google for digital traces of our gracious host, Dean Ponce de Leon **[35 CLICK TO TWO IMAGES]**

3. **[36 CLICK TO "replicability"] replicability**: What we inscribe in one space need not stay there: we have high-fidelity copy-and-paste. The forwarded email, the blog entries about college indiscretions…these can re-appear anywhere.

4. **[37 CLICK TO "invisible audiences"] invisible audiences**: The FOAF phenomenon: "Friend of a Friend". Sure, you may trust your 500 close Facebook friends with your intimacies…but what about each of their 500 friends, and their friends' friends? We're each less than 6 degrees of connection away from Kevin Bacon, not to mention Perez Hilton and the bloggers on TMZ and Rupert Murdoch's Fox News.

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[10] I got this idea from Stowe Boyd's 29 Aug 2010 blog post.

SECTION: "Living in Public"

[38 CLICK on "Living in Public"] What does it mean for all spaces to be public spaces? Surely this will affect the way we design and understand public space.

Let me give you an example: **[39 CLICK TO #havingsex TWEET]**

"That's silly," you say. "Sure, there are a few weirdos, but most people won't be having real-time sex in a networked public."

Not so silly. All spaces will be public. Certainly we know that it's no longer uncommon for people to publicly post words and pictures and videos of their sexual activity after they are done. How big a leap is it for them to stay online while having sex?

[40 CLICK to Retrevo chart] In this 2010 survey, 10% of people under 25 responded that it's perfectly okay to text while having sex.[11]

And this finding is not an anomaly. A 2008 Osterman Research survey found that 11% of adults have used their mobile phones "during *intimate behavior*".[12] A 2010 Harris Interactive study found that 24% of US residents think "it is fine to be plugged into the Internet during sex."[13]

[41 CLICK TO BLANK SPACE] To live our lives in public, we need to evolve new social norms. A recent hot topic on Twitter: when a couple breaks up, who should announce it first on Facebook: the dumper or the dumpee?

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[11] Retrevo Gadgetology Report (2010), as reported in Beth Snyder Bulik, "Apparently that text can't wait -- not even during sex", 5 May 2010, *Advertising Age*, http://adage.com/article?article_id=143705.

[12] "Mobile Messaging Marketing Trends", as reported in "Neverfail Issues Mobile Messaging Trends Report: Pressure To Be Available 24x7 Creates Email Addiction", *ECM Connection*, 23 October 2008, available from http://www.ecmconnection.com/article.mvc/Neverfail-Creates-Email-Addiction-0001.

[13] As reported in "US Internet users staying connected during sex: study", *Yahoo!News*, 16 September 2010, available from http://news.yahoo.com/s/afp/20100916/tc_afp/lifestyleusitinternetsexpctools/.

There are dozens of sites where you can share your breakup stories: thebreakupsurvivor.com, youbrokeuphow.com, breakingupinfo.com, brokenheartsclub.com…

The public breakup can go horribly wrong. **[42 CLICK TO HEADLINE "Husband hacked wife to death"]** She changed her public Facebook status from "married" to "single" just 4 days after they separated. He flipped out.

[43 CLICK TO BLANK SPACE] Of course, the implications of living in public are not all scary. Some are quite exciting. For example, we are moving from a society with (near) **universal literacy** to one with (near) **universal authorship**.[14] Everyone in public is performing, everyone creates…and the nature of networked publics is that our inscriptions persist.

Universal authorship can play a fabulous role in education and learning. But other than people writing words and leaving them in public, what else does it mean to create and perform everything in public?

We scholars and teachers have been learning to live with our drafts and informal work (such as lecture slides) being shared and scrutinized. But that is just a small increment on what we already do. What else are we authoring in public?

Our diaries, from the mundane to the intimate: from getting our morning Starbucks to that great feeling of an empty bladder.

We have personal conversations with our friends in public in MySpace and Facebook.

We report the details of our exercise, whether our pedometer count on WalkerTracker.com, **[44 CLICK TO DAILY MILE]** or running on dailymile.com.

If that doesn't seem too intimate, we share our health conditions and treatment. Here are a few of the 474 people who are Bipolar I who report

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[14] I believe this term was coined by Denis G. Pelli and Charles Bigelow, in "A Writing Revolution", *SEED Magazine*, 20 October 2009, http://seedmagazine.com/content/article/a_writing_revolution/.

their symptoms, treatments and outcomes on PatientsLikeMe. **[45 CLICK TO PLM SCREENSHOT]**

With a Zeo sleep monitor we can record and share our brain's sleep patterns. With a Fitbit or Proteus we can monitor and share heart rate, calorie burn rates, and body position. You can buy a Withings scale which automatically wifis your weight to your computer, and if you wish, sends out a tweet so your friends can help you with your diet.

And of course, our universal authorship extends to writing the self. **[46 CLICK TO WRITING ON THE BODY]** We create new personae. We fluidly engage in gender-bending, locating-bending, even species-bending.

When all spaces are public spaces, we need to learn new ways to communicate. For surely we sometimes will want to maintain some privacy even as our notions of self and private change. What is the future of the technology of whispering?

We've known for a while now that young people often lie to preserve privacy in public: indeed, they are encouraged by their parents to use false names, ages, locations. And youth are engaging in steganography: hiding communication in plain sight.[15] They are learning to speak in layers, sharing intimacies with friends while knowing their parents are listening. We see a rapid proliferation of new vernaculars and slang, and extensive use of generation-specific cultural references as metaphors.

Learning to navigate universal authorship, inscribing our multiple personae in public spaces, speaking in tongues: this creates new challenges. Consider this passage from danah boyd's writing on the topic:

> "The magnified public exposure increases the stakes. Consider a call that I received from an admissions officer at a prestigious college. The admissions committee had planned to admit a young black man from a very poor urban community until they found his MySpace. They were horrified to find that his profile was full of hip-hop

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[15] boyd, danah. 23 August 2010. Social steganography: Learning to hide in plain sight", Apophenia, http://www.zephoria.org/thoughts/archives/2010/08/23/social-steganography-learning-to-hide-in-plain-sight.html.

imagery, urban ghetto slang, and hints of gang participation. This completely contradicted the essay they had received from him about the problems with gangs in his community, and they were at a loss. Did he lie in his application? … I offered the admissions officer an alternative explanation. Perhaps he needed to acquiesce to the norms of the gangs while living in his neighborhood, in order to survive and make it through high school."[16]

SECTION: FUTURE TECHNOLOGIES?

[47 CLICK TO "Future technologies?"] I will wrap up now. I don't know what **future** social media technologies will be like. But **today's** social media technologies are writing on our cultural DNA, and the result is that we will be living our lives in public. That all spaces will be public spaces.

And this fact matters for the **future** technologies we do develop.

[48 CLICK TO "All space will be public space" (TITLE)] We will want them to enable public living. We will also want them to provide affordances for protecting ourselves from dangers of living in public. We will want technologies to help us solve a core paradox of the 21st century: **[49 CLICK TO "Trust Fall"]** can we create safe spaces inside public spaces?

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[16] boyd, danah. (2008) "Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life." The John D. and Catherine T. MacArthur Foundation Series on Digital Learning – Youth, Identity, and Digital Media and Learning (Cambridge: MIT Press), available from http://www.mitpressjournals.org/doi/pdf/10.1162/dmal.9780262524834.119.