



Galloway, Anne. 2006. "Of Seams and Scars: Tracing Technological Boundaries and Points of Attachment." Presented at *Fleshing Out: Wearable Interfaces, Smart Materials and Living Fabrics* Seminar. Rotterdam, Netherlands, 9 November, 2006. Available online at: http://www.purselipsquarejaw.org/papers/galloway_fleshingout.pdf

Author's note: This document consists of annotated presentation slides, and should be considered a complement to any recordings or transcriptions of the actual talk. Please follow standard academic citation practices.

i. hybrid objects & liminal spaces

seams and scars serve as markers not just of things

joined together, but also of things cut apart.

Notes

Thank you for inviting and coming to hear me speak today - it is a pleasure to be here. But I think I may be the only speaker today who does not actually make wearable interfaces, smart materials or living fabrics, so I hope you will bear with me. You see, I am a social and cultural researcher and my interests centre around new technologies and how they come to be.

This means that I am particularly interested in how collaboration between artists, designers, engineers, scientists, academics, businesses, industries, governments and public works – and does not work. I am interested in the different cultures at play - in the different interests, values, politics and ethics that encounter each other in these practices.

So when I was asked to speak about the technologies in the event's title, I found myself wondering who and what come together in all these projects. And since I was originally trained as an archaeologist, I looked to material culture for some clues.

Tracing boundaries and points of attachment requires that I identify some markers, and in both material and metaphoric terms two things immediately emerge: seams and scars. They are intimations of past actions and interventions, of things joined together and things cut apart. The whole that they create is a hybrid, something both new and old. And perhaps most importantly in cultural terms, when we think about them actually being made, they mark liminal spaces.

Anthropologists call spaces of transition, or thresholds between one state and another, liminal spaces. In physical terms, the beach is a liminal space: it is neither ocean nor land, but somewhere in-between. In cultural terms, liminal spaces tend to be navigated by ritual. For example, weddings mark the transition between single life and married life, funerals mark the transition from life to death, and both mark passages and processes that shape individual and collective identities.

i. intervention & potential

seams and scars point to where we have in the past

made or become something else -

and they remind us that we can do so again in the future.

Notes

If seams and scars are the places that mark where different subjects and objects were cut apart and put together, then what can we learn from them? I just explained a bit about liminal spaces, but I'd like to flesh that out a bit by adding the matter of time.

By the time we see or touch a seam or a scar, the act of making it is already done. The fabric or flesh has already been cut and sewn. So seams and scars can only ever point to where we have, in the past, made or become something else. But by stopping a moment to contemplate and appreciate them I cannot help but notice that they are also reminders of what we can do – or avoid doing – again in the future.

In this sense, it is a shame we so often try to hide them!

Although they may indeed be breaks or irregularities, we can also treat them as indicators of our incredible abilities to intervene in the world - to shape and reshape things. Since liminal spaces are spaces of potential, I find remarkable hope in seams and scars. But because liminal spaces are also rather uncertain, I find good reason to proceed with care.

ii. technological seams

“connections, gaps, overlays and mismatches

within and between physical, digital and social space”

- Asa Rudstrom, Kristina Hook and Martin Svensson, 2005

Notes

Now, backing up a bit, I have to point out that I am far from the first to discuss technological “seams.” But perhaps people in the audience today are more familiar with discussions of “seamless” technologies, so I will start there. Whether called pervasive, ubiquitous or ambient computing, there is often the assumption, or expectation, that technology will somehow fade into the background of our everyday lives. Embedded so expertly into our environments and objects – or so the promise and threat go – computing will effectively become invisible, if not transparent (see for example, Greenfield 2006; McCullough 2005; Mitchell 2003; Norman 1999; Sterling 2005). But, just as the physical properties of materials sometimes conspire against our wishes, new technologies glitch and fail.

Early discussions of seams in ubiquitous computing were lead by Mark Weiser. While his early work advocated “calm computing” he later felt the need to clarify that calmness does not necessarily imply seamlessness. More recently, Matthew Chalmers and his colleagues have advocated somewhat of a return to Weiser’s original objectives: “Weiser describes seamlessness as a misleading or misguided concept. In his invited talks to UIST94 and USENIX95 he suggested that making things seamless amounts to making everything the same, reducing components, tools and systems to their ‘lowest common denominator’. He advocated *seamful* systems (with ‘beautiful seams’) as a goal” (Chalmers 2003). And following the call to both reveal and take advantage of infrastructural failures normally considered to be problematic, the notion of seamful design has been most recently used to focus on “connections, gaps, overlays and mismatches – within and between physical, digital and social space” (Rudström et al. 2005).

My earlier identification of seams as liminal spaces is fully compatible with the seams described here – they are places where things change and interesting things happen. But my perspective can be distinguished by its explicit attention to the politics and ethics at hand, not just in the uses of new technologies, but also in their underlying assumptions and values (Galloway 2004a), and their creation and destruction too.

ii. technological seams

“connections, gaps, overlays and mismatches

within and between physical, digital and social space”

- Asa Rudstrom, Kristina Hook and Martin Svensson, 2005

Notes continued

Chalmers and his colleagues do conjure Weiser, as I have in my own work, to emphasise the social and cultural dimensions of ubiquitous computing: “Paraphrasing Weiser’s talk slides only slightly, and retaining his emphasis: making everything the same is easy; letting everything be *itself, with* other things, is hard” (Chalmers et al. 2003). It is not difficult to see the similarities between Chalmers’ interpretation and contemporary discourses of cultural pluralism at both local and global scales. However, traditionally outside the domain of human-computer-interaction research, the politics and ethics of these practices are most often treated as side-notes, or simple acknowledgements that there are, indeed, politics and ethics at hand.

References

- Chalmers, M. 2003. “Seamful Design and Ubicomp Infrastructure.” Proceedings of Ubicomp 2003 Workshop At the Crossroads: The Interaction of HCI and Systems Issues in UbiComp, Seattle, USA. Available online at: <http://www.dcs.gla.ac.uk/~matthew/papers/ubicomp2003HCISystems.pdf>
- Chalmers, M., I. MacColl and M. Bell. 2003. “Seamful Design: Showing the seams in wearable computing.” Proceedings of IEE Eurowearable 2003, Birmingham, UK. Available online at: <http://www.dcs.gla.ac.uk/~matthew/papers/Eurowearable2003Draft5.pdf>
- Galloway, A. 2004a. “Intimations of Everyday Life: Ubiquitous Computing and the City” *Cultural Studies* 18(2-3): 383-407.
- Greenfield, A. 2006. Everyware: The Dawning Age of Ubiquitous Computing. PeachPit Press.
- McCullough, M. 2005. Digital Ground: Architecture, Pervasive Computing, and Environmental Knowing. Cambridge: MIT Press.
- Mitchell, W.J. 2003. Me++: The Cyborg Self and the Networked City. Cambridge: MIT Press.
- Norman, D. 1999. The Invisible Computer. Cambridge, MIT Press.
- Rudström, A., K. Höök and M. Svensson. 2005. “Social positioning: Designing the Seams between Social, Physical and Digital Space.” Proceedings of HCII, Las Vegas, USA. Available online at: <http://www.sics.se/~kia/papers/HCII2005.pdf>
- Sterling, B. 2005. Shaping Things. Cambridge, MIT Press.

ii. other seams & scars

but not all hybrids are created equal -

how they come into being brings together

different risks and responsibilities.

Notes

So what are these politics and ethics? To start, “letting everything be *itself, with* other things” is an interesting position. It acknowledges singularities, and values collectives, and it certainly implies the kind of convergence without consensus that has been advocated by researchers like Bruno Latour. But I want to focus a bit now on the hybrids that are created in these assemblies, and on what Latour (1993) calls the “Parliament of Things.”

In the case of seams more literal than the technological ones I just described – although equally applicable to xenotransplantation and dressmaking - something is cut from one thing, and sewn to some other thing, to create yet another thing. And the kind of hybrid depends on what was excised and what remains, as well as what was brought together and what was kept apart. After all, we are talking about actual things, processes and decisions here.

With each new creation we arrange and re-arrange different risks and responsibilities. Sometimes the resulting assemblage is so messy that it can be difficult to figure out how one is accountable to - and for - these arrangements. And from my perspective, if we can encourage and support greater accountability, all the better.

References

Latour, B. 1993. We Have Never Been Modern. Cambridge: Harvard University Press.

ii. critical seams & scars

whether by deletion, erasure or purification

the processes and implications of individuation

become difficult to identify - or change.

Notes

But actually, when I think about cutting and sewing fabric or animal tissue, I wonder about what gets washed off, or thrown away, in the process. The seam or the scar can always tell me that something happened, and while I can always look to the joined object – the hybrid - I may never be certain about the details of what was removed to make it. For example, some cuttings and joinings are very violent and painful, and amputees are rarely admired. While I believe that all seams and scars have their own beauty, some are ragged and worn, or the connection is always under threat. I would suggest that the politics and ethics at hand in all cases challenge us to witness – not just gaze upon, but genuinely witness - these processes.

And actually, this is a rather serious challenge because we have the opportunity, if not the responsibility, to identify what we both desire and allow to be connected and separated. After all, by making decisions about what is relevant or irrelevant, inside or outside, us or them, we not only shape a new kind of hybrid, but we also reshape each of its constituent members.

ii. critical seams & scars

whether by deletion, erasure or purification

the processes and implications of individuation

become difficult to identify - or change.

Notes continued

As I have discussed in the past, “in an assembly - in a parliament of things - design is not objective, not given, not matter-of-fact. Instead, design is a *matter-of-concern* that requires the convergence of difference, of *taking into account* and *being accountable* to things that appear irrelevant or contrary to our personal interests” (Galloway 2005).

Although seamlessness may remain a powerful and effective metaphor to guide particular projects, when it comes to actually getting the work done - and the challenges of having to do it with people who can be very different from each other - then I suggest it is in everyone’s best interests to recognise the importance of seams and scars in marking places where interventions can be made, or where potential can be found and acted upon.

References

Galloway. A. 2005. “Design in the Parliament of Things.” Presentation at [Design Engaged](#), Berlin, 2005. Available online at: http://www.purselipsquarejaw.org/papers/galloway_designengaged_05.pdf

iii. practices of modification & maintenance

materials and bodies and institutions are shaped

by multiple forces, never neutral.

Notes

Getting back to the shaping processes, or to the things that make seams and scars, we can start by acknowledging that there are multiple forces at hand and they are never neutral. For example, dieting, exercise and cosmetic surgery are technoscientific practices that shape the human body and the body politic, or citizens, industries and nations. But as philosophers like Deleuze (1992, 2006) have claimed, power is now more about control than discipline:

“Control is not discipline. You do not confine people with a highway. But by making highways, you multiply the means of control. I am not saying this is the only aim of highways, but people can travel infinitely and ‘freely’ without being confined while being perfectly controlled. That is our future.”

In order to modify and maintain – to control - all these “wearable interfaces, smart materials and living fabrics” there are always a variety of different, and sometimes divergent, cultural interests and values in play. And just as with a broader selection of mobile, wearable, context-aware, networked and responsive technologies, where people actually “draw lines” and “take sides” is where we need to pay attention (Galloway 2006; Galloway and Ward 2006).

References

- Deleuze, G. 1992. “Postscript on the Societies of Control.” *OCTOBER* 59: 3-7.
- Deleuze, G. 2006. *Two Regimes of Madness: Texts and Interviews 1975-1995*. New York: Semiotexte.
- Galloway, A. 2006. “Technosocial devices of everyday life.” Presentation at *Architecture and Situated Technologies*, New York City, 2006. Available online at: http://www.purselipsquarejaw.org/papers/galloway_situatedtech.pdf
- Galloway, A and M. Ward. 2006. “Locative Media As Socialising And Spatializing Practice: Learning From Archaeology.” *Leonardo Electronic Almanac* 14(23-4). Available online at: http://leoalmanac.org/journal/vol_14/lea_v14_n03-04/gallowayward.asp

iii. material cultures

from fibre technologies to tissue engineering,

military meets art meets government

meets academia meets business meets publics meets...

Notes

Given increasing opportunities and support for collaborations between universities, industries, artists and others in the kinds of research we've gathered to present and discuss today, a deep and rich understanding of the associated material cultures can only help everyone involved make more informed decisions, and hopefully, to take greater responsibility for themselves and others.

Can we identify global concerns? What can we learn from each other's local concerns? And remember, we do not need to agree – but we do need to listen to and answer each other.

I think that many of us here are familiar with notions of citizenship and democracy that rely heavily, and in a rather tricky way, on tolerance and consensus. Although it is no less an attempt to organise things, what I am suggesting is *convergence*. And that inevitably means that sometimes there will be conflict. We can try to reduce the intensity of the conflict, but the desire to eliminate it entirely is similar to the desire to get rid of, or hide, seams and scars.

(I feel compelled to mention that I do believe in politeness and civil discourse. I am not suggesting that people take the idea that conflict is unavoidable as an excuse to be ugly or antagonistic. I very much dislike rude and mean behaviours, and I cannot support the kinds of social interaction they inspire.)

What I am suggesting is that it might not be such a bad thing to actually talk *with* the presenters and other strangers here today, rather than just talk *about* them. But the best case scenario, of course, is to do both – and many times over!

iv. stitching the ethical & aesthetic

bottom-up ethics always already decide

where beauty and pain dwell.

Notes

Now, in order to bring all these loose threads together, so to speak, I would like to discuss two final dimensions of any critical engagement with seams and scars.

As I discussed in my PhD dissertation, rather than having to do with morals, ethics also refers to *ethos* - or the characteristic spirit and sentiment of a people. This bottom-up rather than top-down approach to social conduct is also related to Latour's "parliament of things" and his call for assembling around matters of concern rather than matters of fact: "There are no more naked truths, but there are no more naked citizens either. The mediators have the whole space to themselves" (Latour 1993). Aesthetics, not in the sense of art but in the perception and declaration of the beautiful, also arise from ethics (Galloway 2004b).

These concepts can be used to help social scientists, artists, businesses, governments and citizens engage and evaluate social and material interactions within increasingly messy collectives of humans and non-humans. Following Maffesoli (1995), ethical action and aesthetic experience are always already productively combined in social and cultural life. As Shields (2002) further explains, "Ethics alone is insufficient to make changes or guide actions. It is a content that requires a form – an aesthetics . . . Aesthetics alone is equally insufficient, for it leads to an aestheticized politics of manipulation and of form alone without content."

iv. stitching the ethical & aesthetic

bottom-up ethics always already decide

where beauty and pain dwell.

Notes continued

The remaining challenge, then, is to assemble and mediate shared matters of concern in an attempt to negotiate--and create--goodness and beauty in our lives and work.

In many ways we already do this everyday, but right now I am talking about making the implicit more explicit. I'm talking about bringing the seams and scars into full view. I am talking about witnessing them – and each other. About making decisions and taking action. About accepting responsibility.

References

- Galloway, A. 2004b. "Fashion Sensing / Fashioning Sense: A conversation about aesthetics with International Fashion Machines' Maggie Orth." *Horizon Zero* 16. Available online at: <http://www.horizonzero.ca/textsite/wear.php?is=16&file=8&tlang=0>
- Latour, B. 1993. *We Have Never Been Modern*. Cambridge: Harvard University Press.
- Maffesoli, M. 1995. *The Time of the Tribes: The Decline of Individualism in Mass Society*. London: Sage.
- Shields, R. 2002. "Social Science as a Design Profession: New Visions and Relationships." In *Design and the Social Sciences: Making Connections*, J. Frascara (ed), pp. 201-206. London: Routledge.

iv. stitching the social & cultural

what - and whom - are being made?

how can they be unmade?

or remade?

Notes

In doing so we cannot help but to also stitch together the social and cultural concerns that shape and are shaped by all of the technologies presented and discussed today. In paying attention to seams and scars we can all ask what, and whom, are being made? We can ask how they – and we - were made. And how they – and we - might be unmade or remade.

These are not easy questions, but I maintain that they are amongst the most important questions if we seek a critical and productive understanding of our actions in the world.

Assuming that each person in the audience has some interest in “wearable interfaces, smart materials and living fabrics” then I would like to close by asking each one of us, myself included, to take the time today and tomorrow to critically reflect upon, and talk about our own concerns, values, decisions, practices and actions – and what roles they play in these emerging techno-social assemblages.

thank you

www.purselipsquarejaw.org

cc photo credit: splorp @ flickr

Notes

Thank you very much.

A copy of this document is available online at:
http://www.purselipsquarejaw.org/papers/galloway_fleshingout.pdf

The original photo used as the background image is available online at:
<http://www.flickr.com/photos/splorp/33482652/>

For more information on Anne Galloway's research, please see www.plsj.org

Questions and comments are always welcome.