how do we design for the everyware

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IMAGE BY JAMEHAND ON FLICKR.COM
definition:

hardware, software...

“everyware

- physical computing, the Internet of Things, haptic computing and things that think -
“Each time a new technology comes along, new designers make the same horrible mistakes as their predecessors. Technologists are not noted for learning the errors of the past. They look forward, not behind, so they repeat the same problems over and over again.”

- Donald Norman, The design of everyday things -
A knifes edge

A balancing act between using what we already know - when learning how to use new technology. And, at the same time, having an open mind when trying to understand its nature and potential.
Three design concepts for the everyware
Understanding technology
“What’s this NumLock thing for? Do people really use it, do they need it, do they want it in their home?”

TED: Yves Behar on designing objects that tell stories
http://www.ted.com/talks/lang/eng/yves_behar_on_designing_objects_that_tell_stories.html
the fog of technology

Unfortunately the fog of technology diffuses the process of building something meaningful by trivializing the discussions and spending too much time focusing on irrelevant details. When we think of the Internet we are not thinking business models, identity and brand value. We are thinking users (what is a user?), HTML5, responsive design (why would you offer the same service in every situation?), apps or clicks.
Take a look at other pieces of technology: bread, asphalt, language, bicycle, chairs, faucets. Now do you think about these things as technology? They work and they are, no questions asked. But this is not the case with the Internet, why?

Understanding the nuts and bolts of the Internet is as important to a business as understanding the complexities of the mechanics that goes on inside a faucet when we need luke warm water to wash our hands.
"If we think about the dependency we have on this other technology, called the alphabet, and writing, we are totally dependent, it’s transformed culture. We cannot imagine ourselves without the alphabet and writing.

And so in the same way we are not going to imagine ourselves without this other machine being there."

- Kevin Kelly
technology

“things that don’t work”
“stuff that didn’t exist when I was born”

The Internet is fascinatingly simple, if we just stop referencing it as technology and start thinking of it as a loaf of bread – because our customers already are.
Motivation aesthetics
“THE FIRST IMPRESSION INFLUENCES OUR DESIRE TO UNDERSTAND”

- DONALD NORMAN

“Research by Norman found that the more aesthetically pleasing the design of an alarm clock was, the more time people invested in understanding how it worked.”

Donald Norman found that a favorable first impression increased the willingness to understand.
Through the “halo effect” first impressions can color subsequent judgements of perceived credibility, usability, and ultimately influence our purchasing decisions. **Creating a fast-loading, visually appealing site can help websites succeed.**

- http://www.websiteoptimization.com/speed/tweak/blink

When the brain is exposed to a new experience it reacts instinctly. This is the visceral reaction. Directly after this is starts to decipher and rationalize the experience in order to understand it – not just react to it.

In this process the brain tends to play down the stuff that disagrees with the visceral reaction and focus on the stuff that agrees with it.

This is the cognitive bias. Our inherent stubbornness, and refusal to admit to that we are wrong – even to ourselves.

Research provided by **Gitte Lindgaard.**

Gitte Lindgaard found that a favorable first impression increased the perception of credibility, usability and influence.
One recent paper that begins to operationalise aesthetics (LaVie and Tractinsky 2004) identifies two dimensions that authors label “classical” and “expressive” aesthetics, respectively.

“Classical” aesthetics pertains to aesthetic notions dating back to antiquity and referring to orderliness in design, including concepts like:

“clean”, “pleasent”, “symmetrical”

This dimension contains thus both cognitive (clean, symmetrical) and cognitive emotional responses (pleasent).

However, the fact that “aesthetics” also appears as a dimension of aesthetics is problematic. “Expressive” aesthetics reflects the perception of the 116 G. Lindgaard et. al. designers’ creativity and originality, and includes concepts like: “sophisticated, “creative, “uses special effects” and ”fascinating”.

– Gitte Lindgaard

Both (Norman and Lindgard) came to the conclusion that the driver for a good first impression is aesthetics.
EMOTION IS MOTIVATION
EMOTIONS ARE NOTHING MORE THAN A TOOL TO MOTIVATE US TO LEARN STUFF

THE NEURON & THE SYNAPSE

THE NEURON: The elementary signaling unit of the nervous system.

THE SYNAPSE: The axon of one neuron communicates with the dendrites of another neuron only at specialized regions—synapses.

Adapted from Eric R. Kandel, In Search of Memory: Norton, 2000

Source: How the mind works: Revelations
http://www.nybooks.com/articles/21575
“If you think about sports technology in the past, the challenge around this space was that the experience looked a bit like this ... and I say they [the user interfaces] combined the emotional appeal of an EKG with Microsoft Excel. So if you put those two together, that rich emotional experience [irony], that’s pretty much what you got in sports technology”.

- Michael Tchao
Startups, this is how design works.

- **Graphic Design**
- **Interaction Design**
- **Dribbble**
- **Finding Great Talent**
- **Designer Founders**
- **Resources!**
- **Data: what does the industry think?**
- **We are already here...**

Go to [http://startupsthisishowdesignworks.com/](http://startupsthisishowdesignworks.com/)
Do you remember *Second Life*? Simulating reality inside a flat box accessible only through rudimentary, complex and unfit tools.
eight by eight
grid of black and white pixels

The effects of the Tamagotchi are well documented; they sold 70 million of them... The immersion they created, that was so powerful it had to be banned (from certain schools), was done by an eight by eight grid of black and white pixels.

It doesn’t aspire to something, it becomes real by behaving real. By demonstrating the behavior of things that are real. Reality is augmented when it feels different, not when it looks different.

- Kevin Slavin
http://youtu.be/o03wWtWASW4
In its first iteration people were invited to play by using psp-controllers. Very few people played. In the next version the technology was exchanged for something *people could touch* - balls - and people won’t mental...

- Multitouch Barcelona
“we are in the cave painting era of computer interfaces”

- Anand Agarawala
the future is more of this!
m + d = a

- Robin Hunicke

Thank you!
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