

eMe in the Memespace

10.4.2001 / Kari-Hans Kommonen, Media Lab UIAH / Machines That Become Us

Machines That Become Us

To investigate the relationship between people and machines which is in the making, it is important to realize that the machines in question are essentially memetic machines; to study their hardware features is of limited utility. Memetic machines, then, need a history. In the end, the memespace will present eMe.

Design

Design refers to the intentional activity of creating designs, as well as to the outcome, a design. Most often design is used in the context of intentional design, and in connection to established design disciplines. However, design can also be understood in a broader sense.

Most things exhibit a design, whether they have been intentionally designed or not. For example, human beings have a set of universal features such as two legs, two eyes, one nose, and a number of more specific ones that make it possible for us to differentiate the human species from other species. Chair, house, shirt, bread, bread making process, magazine, all have designs. In the immaterial realm, things like marketing campaigns, social security systems, laws, international trade agreements, cultural rituals, have designs.

We are very experienced in recognizing specific designs, in seeing their similarities and differences, even if we do not routinely use the term design to discuss them.

Evolution

Although evolution is usually discussed with the biological evolution in mind, evolutionary patterns are easy to recognize everywhere in the universe. If we focus too much on the particularities of biological evolution, such as genes, sexual reproduction, mutations etc., we may conclude that evolution can't operate outside of the biological realm, e.g. since operating systems do not have genes and because intentional design plays a dominant role in the shaping of their designs, they do not have anything to do with evolution. But if we allow evolution to operate with different mechanisms, appropriate for each domain, we find that it provides a framework that may help us to make sense of developments in the world.

From such a broader perspective, evolution can be described as the self-organizing process that creates designs, with eventually increasing level of organization.

Intention and Design

But doesn't design require intention and designers? In Darwin's time, it was not easy to propose that biological species were not designed by the Creator. Also today, many people believe that they were. Darwin avoided the argument by proposing that God created the process of evolution.

In addition to biological evolution, we can see a lot of examples of design around us which emerge as result of a diversity of activities, by a diversity of actors, and often without clear intentions. Designs emerge and are created, and sometimes the process is very intentional, and sometimes very little so. But especially when we consider those designs which may not be famous but have become truly successful in the course of everyday life, we will likely find that the actual chain of events that resulted in that design was not at all direct and intentional.

Although people design intentionally, evolution has its say in which designs, and according to which conditions, become successful. Intentional design which tries to fight evolutionary trends will probably not survive without modifications.

Platforms

Evolution seems to be progressing from simple systems to higher levels of organization and complexity. While lots of different designs and specific instances of those designs are constantly born through which evolution is manifested all the time, significant qualitative changes in the evolutionary landscape take place when new platforms emerge. I use the term platform to refer to systems and structures which other systems and structures can rely on. The platform reduces dramatically the efforts necessary to achieve a level of functionality, because a large part can be delegated to the platform.

For example, cells make more complex organisms possible; the food available in the ecosystem makes it possible for humans to survive; the minds of human beings make the evolution of ideas possible; electric grid makes everyday appliances feasible; the internet makes global email connectivity realistic; credit cards make international payments easy; and so on.

On an even higher level of abstraction, evolution seems to operate in a similar fashion in many environments. A very interesting feature of evolution is that it seems to be creating platforms for increasing the speed and effect of its own progress.

Memes

Richard Dawkins proposed in his book "The Selfish Gene" the idea that we can understand evolution better if we take the gene's point of view - that human beings are just a way for genes to replicate themselves. In the same book, he compared genes to ideas which replicate themselves in our minds, and introduced the concept of the meme to describe these.

Following Dawkins' way of thinking, but from a more holistic point of view, one could argue that memes are, being higher order constructs, even more important for evolution than genes, and that from the meme's point of view, genes are just a way for memes to operate a biological evolution in order to develop and secure a platform for their own emergence and replication.

In any case, memes exist in symbiosis with us human beings, but with media and systems and structures which embody and preserve them, are not any more completely dependent on our existence. It is possible that some other existing species carries some of our memes, or that a future archeologist will become a carrier after our extinction.

Memes are very powerful. When we act, we often act because of a meme which we believe in.

Designs are also memes. A design can be perceived or invented by a mind and implemented or reproduced, or it can be encoded in language. In this sense, evolution has been in the business of creating memes already before the human species was available to ponder and amplify them.

Memetic beings

The human species is very powerful, because of its capacity to create and process memes (which has resulted in technology, culture and social organization), and has been able to dominate all other species. However, human beings are not the masters of the world. The memetic structures and systems, such as habits, cultures, organizations, nations, laws - the results of cultural evolution - are much more powerful than people.

All people in the world have been assigned to the jurisdiction of some memetic structure, whether they like it or not. At this moment, the structures which have most authority to set the limits for our freedom, and which in return offer us some benefits, are nations.

The laws which the society, in the form of nations, uphold for us declare some of the memetic structures, for example corporations and associations, as "juridical persons", which have rights and responsibilities and should be treated very much like human beings. They own property, make agreements, employ people, use resources, design and build, and influence the society very much, and usually in a larger scale than individual people.

It may be a good idea to look at these kinds of memetic structures through the metaphor of a species, and maybe call them memetic beings, because when we simply look at them as some human constructs, we tend to miss some of their important characteristics.

As an example, we tend to believe that they would or should somehow reflect and respect human values, because they are created by humans and run by humans. But when we look at them as memetic beings, of a separate, powerful species, which lives in symbiosis with humans, we can achieve better clarity in studying how things like values can enter such a system and influence its activities. While human values

and priorities influence memetic beings, they have their own sets of values and priorities, embodied in their designs. For example, businesses must by law be profitable in the long term, otherwise they will be dissolved, and because of this, in a survival crisis of a business, human priorities will have to submit to the profit priority.

Memetic society

Powerful memetic beings run the society. Their power comes from a human constituency, but these humans are weak as individuals and can not really influence the large memetic beings, unless they can get into a controlling role within the organization, or create a new memetic being, some kind of a structured movement, to put some weight behind their words.

The nature and shape of the society depends on the ability and interest of its human members to develop and maintain such organizations. This is where the digital technology and networks come to play.

The Essence of the Machine

While the significance of the mechanical machine is based on its functionality, power, and consequences of its use, we bind this significance to its material characteristics. We are not used to seeing the memetic dimension of the machine, the way how its significance, its essence, is embodied in its design and how the design produces the results.

In computers, the designs which produce the result (the software) are separated from the designs that make memetic processing possible (the processor). In computers, it is the software that produces its significance. A computer without software is in all practical terms dead, or at least comatose. The machine is powerful if it has powerful software.

The software consists of memes, of instructions expressed in a language which the machine can obey, or perform. To a very limited extent, the computer resembles a mind. Memes are in control of the computer, as they control the human mind. The computer is a flexible, fluid environment, and can be adapted to new circumstances and goals, with new memes.

But the human mind and the computer remain very different because the computer does not have intelligence to interpret or decipher ambiguous memes, nor will or stamina to negotiate with them. It operates according to the memes that the will of a human installed in it. It is not an autonomous intelligent actor, but as a powerful memetic prosthesis it can extend the memetic reach and augment the memetic landscape of the human beings who use it.

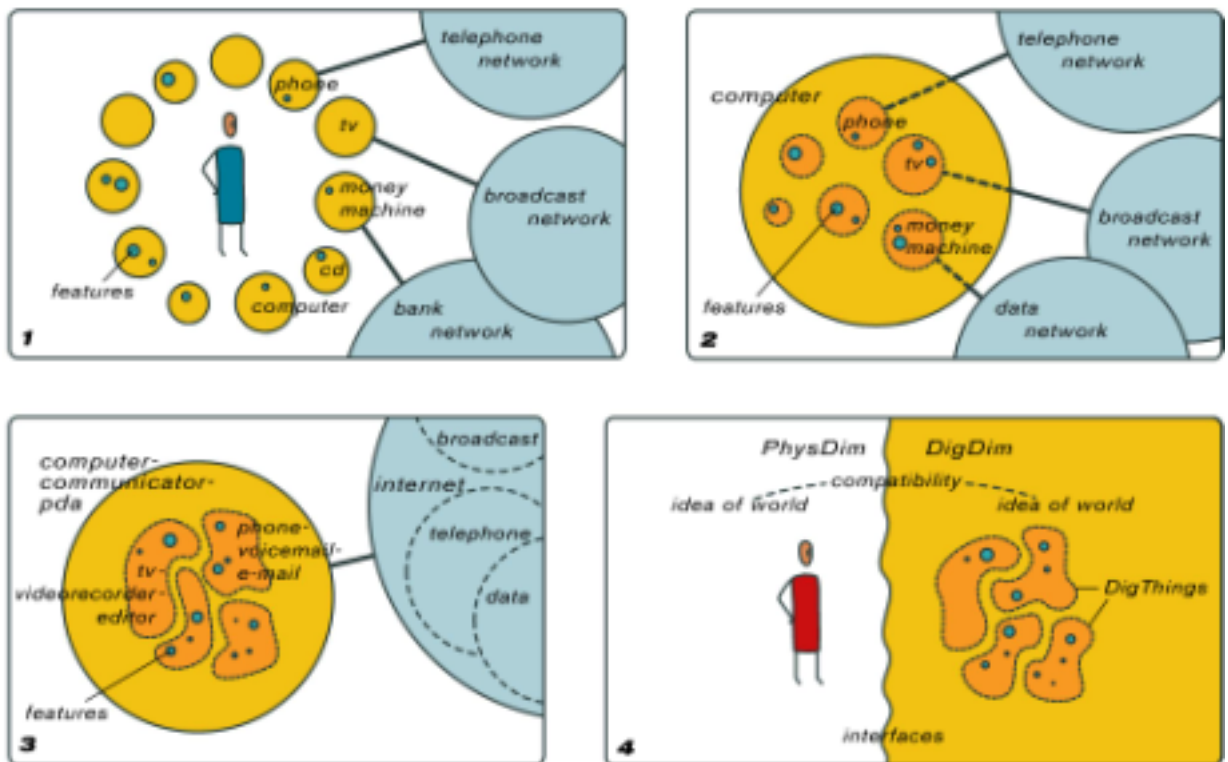
Digital Dimension

As digitalization proceeds and computers become connected to each other and to a global network, they begin to form a global universal software environment, or a digital dimension, a new efficient environment for memes and people to interact with each other.

With this development, the differences between digital machines are becoming less and less significant, except for their particular interfaces with the material world. The most successful and ubiquitous machines will try to become transparent and get out of the way, and at the same time provide for us the most direct and intuitive connection to our digital things, wherever they reside in the DigDim.

It is likely that as the hardware becomes less expensive and ubiquitous and they have more extra power to cater to the diverse needs of people, software compatibility becomes a popular requirement, and the DigDim evolves into a seamless universal software platform.

from gadgets to digthings



© 2000 Kari-Hans Komonen / visualization Matti Aivilommi; Future Media Home, Media Lab UMRH

The memetic evolution on the digital platform will be very fast, because no changes in the hardware are necessary, no material is wasted, no new material is required, and any interested parties in the whole global population can theoretically participate in it.

Thus the essence of the future digital machines is in how they make our dynamic memetic extensions in the digital dimension possible, and how they make them available to us.

Memespace

In the DigDim, the various human media also converge and form a global mediaspace.

The memes within the media, in turn, form a global memespace.

The digital memetic platform increases our personal and social memetic capabilities, and in correlation with the number of others who are involved in the digital dimension, it becomes a social, cultural, economical and political necessity to participate and have appropriate competences.

All kinds of communities of interest thrive, because in a global memespace they can always find members, even if in their physical location nobody understands their interest.

eMe

We human beings participate in the creation of the memespace, and through our activities in the digital domain, we also create a virtual digital existence for ourselves. A number of people have suggested this concept. I want to nurture this meme, and call it eMe¹.

What does the eMe contain? eMe is the collection of digital information, media and objects that relate to me, wherever they may be. My identity is conveyed through my eMe to those who approach me through the digital dimension.

Most parts of eMe are very intimate and private to me. Others will not be allowed to access my personal memories, logs of events or ideas in my notebook, for example.

I have control over eMe only to a certain extent; lots of different actors in the world are busily creating their own profiles of eMe from the digital traces I leave when I visit their sites, when I use their credit cards, when I cross passport inspections, when I get medical care, and so on.

For cyberbusiness, people exist only as eMes, unless the real person behind needs to be pursued for prosecution.

¹(This is not a completely new name, although rare, for this kind of a meme. A search in the net found a project in Maryland: "e-me: Electronic Self-Portraiture, an educational outreach program to create a collective portrait of the emerging cyberspace student community", at <http://www.inform.umd.edu/EdRes/Colleges/ARHU/Depts/ArtGal/.WWW/digvil/eme/eme.htm>)

The significance of eMe is growing also in other kinds of areas. Artists need to be able to show their portfolios on the internet. Researchers must publish their work in electronic form and make them available in digital libraries. People will be judged according to the eMe. People who do not take care of their virtual identities will not be invited to job interviews.

Soon people who do not have eMe cease to exist for a large part of the society. People who do not have email addresses will not be invited to parties.

I believe that the society will find that eMe and the way how others can construct and configure it, needs to be quite well regulated, because the misuse of detailed information about people is very easy, and its consequences in a global network which functions also as a distributed memory system, can be devastating and potentially eternal.

As the importance of the digital memespace grows as the central ecosystem where we work, and as the most useful way to influence society, the importance of my eMe as my representative grows in the same proportion. eMe is about to become a major area for creativity and design, and for style and fashion, but in the memetic space, and according to memetic logic.