Trusting our Trust?

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Abstract. Trust is a main concept in the interaction worlds of human. In our interpretation of actions of humans and artificial actors we are influenced by our meaning on the trustworthiness of the actors, we have to cope with. In a world with artificial intelligent actors a reinvention of trust and distrust is necessary.

Trust and Distrust

Trust helps humans to deal with their social environment and is present in all human interactions. Without a minimum of trust in the other artificial or human actors, in organizations, in infrastructures, etc. there is no interaction. Human society is based on a that minimum of interaction. Trust and distrust affect how we interpret the actions of others and how we establish and conduct the interaction with others (Govier 1992, p. 18). Trust in an interaction is bilateral but not symmetrical. The first relation of trust is usually the trust we have in our parents. A child is in a dependent position and wants at the same time to learn and to explore its environment. According to Anette Baier we see in the child that some degree of innate and selective trust is necessary to survive. As a child humans have experienced that they can trust others. To have trust means always the acceptance of our personal vulnerability caused by uncertainty about the future behavior of others human and nonhuman actors (Baier 1986, p. 241). According to Trudy Govier distrust is based on the fear that other actors may act in ways that are immoral or harmful to us. The vulnerability to others implies a serious risk. She sees trust and distrust as contraries not contradictories. There is a mental space between trust and distrust. (Govier 1992, p. 17, 18)

Trust as an unconscious process

Developing trust in human or artificial interaction partners is mostly not a conscious process. In communities we trust other humans and we take over their interaction patterns. Trust is frozen in our routines of our daily live. Our human and artificial interaction partners are ready to hand; available for the actions we need to do and want to do. Under this aspect of use as an integration of ready-made technological actions in human activity, based on experiences, humans are always in a process of gaining a certain status of mental invisibility. This status has a risk, to be frozen in a frame; in a limited scale of possible actions in specific situations (Keeler 1996, p. 293). Mental invisibility is not only negative. Humans need to have a lot of obviousness in their living world to handle daily life. (Scheman 1993, p. 208). Trust building is a cumulative process where the level of trust in the earlier stages affects the level of trust in the later stages and impacts the development of longer-term trust relationships. We have learned that the easiest way out is to trust a lot in our environment without questioning. The process of trusting is always having expectations and taking risks. Trust should therefor be hard to get and it should in spite of our routines needs constant attention to maintain it.

The necessity of conscious trust

Humans need to have trust in a lot of situations mediated by the experiences of ourselves and others. But because of this necessity we have to listen careful to the warnings from other "trustful" actors. According to Rosi Braidotti we live in

> „... strange times, and strange things are happening. Times of ever expanding, yet spasmodic waves of change, which engender the simultaneous occurrence of contradictory effects. Times of fast-moving changes which do not wipe out the brutality of power relations, but in many ways intensify them and bring them to the point of implosion. Our body is a point of overlapping between the physical, the symbolic and the material social conditions. The body is an inter-face, a threshold, a field of intersecting material and symbolic forces, it is a surface where multiple codes (race, sex, class, age, etc.) are inscribed.“ (Braidotti)

In our time the relationship to computer systems will change from „explicit interaction that requires always a kind of dialog between the user and a particular system or computer, … to implicit interaction.“ (Schmidt 2005, p. 162, p. 166). Implicit interaction is not a symmetrical dialog. In this dialog trust has become an rationalized pre planned attribute which can be checked by the artificial actors. Humans are not expected to interpret that trust. Humans are observed if they are trustworthy enough to be in the interaction environment. In the intelligent world the ‘relationship’ between us and the technology around us is no longer one of a user towards a machine or tool or a product, but of a person towards an ‘object-became-subject’. Human bodies will become the ready-made sources of data for

the ambient technology, enframed in the interaction possibilities of the intelligent environment The subject is replaced by the (artificial or human) agent, whose action possibilities can be planned and reduced (Crutzen, 2009). In the nineties under influence of ICT the human physical body seems to disappear and seems according to Rosi Braidotti to promise a world beyond gender differences. However in her opinion the gender gap was also growing wider. (Braidotti, 1996) This disappearance of the body has lead to an invisible artificial technology in which the body is reduced to a resource of input impulses for the actions of invisible intelligent objects. But how can humans cope with trust and distrust if the interaction relation has a lot of invisible elements?

The trust efforts of the providers and producers

If trust is as a set of socially learned and socially confirmed expectations then we should question in what worlds providers and producers of ambient intelligence reside and what social constitutions they want to create for humans.

Providers know that physical invisibility will not lead to mental invisibility. Not sensing a technology could be counterproductive; humans could get used to the effects of physical invisible technology, but at the moment the tool acts outside the range of their expectations, it then will just frighten them because they cannot control it. They try to avoid these distrusting experiences. Producers and providers realize that the acceptance of physical invisibility is mostly the outcome of a long process of little changes; each change having become mentally invisible. In our trust building towards tools we are forced to interact with unknown human and artificial actors; acting behind their sensible surface. Providers know that in a state of mental invisibility humans will develop an obvious trust, like a baby trusts his parents.

Therefore it is not astonishing that a well known producer and provider of ambient technology has chosen the baby, children and parents as the symbols for the easy and simple relation we should have towards technology.

It is also not astonishing that there are various trends to impersonate the Ambient Intelligence into screen-based humanoids, equipped with expression of "simulated" emotions and empathy, and into "social and huggable" love-returning pet robots. We see standardized female avatars in the web trying to over-trust us with a simulated care. Simulating a superficially trust could be covering up for the lack of trust attitude of the artificial intelligence and it is only a cognitive barrier for the doubts we should have.

It is not astonishing that providers, scientist and producers try to force the domestication of Ambient Intelligence by jumping on the bandwagon of some fundamental fears of the individual and society such as the present loss of security and safety because of terrorism, the necessary but unaffordable amount of care for

the elderly and the patients and handling the complexity of combining professional and home work,

Although there are many attempts to implement a defensive form of trust in the intelligent environments. A trust that is modeled in rationalized and planned way and based on security and control. Humans should realize that the others are not always the artificial actors in our environments. The others are the human and artificial actors behind the artificial surface. They want to plan "security". A security that is opposite to trust because it is based on control. Modeling trust in artificial actors based on the human notion of trust is problematic because it indicates

> „a fundamental incompatibility between our “human” notion of trust and the computational processes that try to mirror them.“ (Langheinrich 2005, p. 206)

The infiltration of our daily live with sensing, computing, transmitting and acting hardware continues, will cause a drastic change of the relation between humans and artificial intelligent tools and environment. New meanings of "home", "intimacy", "privacy", "identity" and "safety" will be constructed because the "visible" acting of people will be preceded, accompanied and followed with the invisible and visible acting of the artificial intelligent tools and environments and their providers. In this change we should be aware that the way we deal with trust and distrust based on family care and friendship is not appropriate anymore. Questions such as: „How can within this invisible interaction, reliability remain "visible" if human cannot interrupt the process of repeated and established acting anymore?“, „How is "the trust giving" implemented?“ and „How can artificial actors recognize and interpret the human process of doubt?“ are unanswered because the preplanned implemented models of trust cannot cope with a situated, context dependent human trust development that is based on experiences.

What to do?

Towards the invisibility of the intelligent ambient environments and their producers and providers there are compelling grounds of distrust. Can we in this situation answer the question of Trudy Govier:

> „How can we progress from a situation of warranted distrust to one of well founded trust?“ (Govier 1992, p. 18)

Perhaps society should seriously redesign the contracts we enter into. Contracts could offer according to Baier at least the trusting party a kind of security (Baier, 1996, p. 251). However before we make that contract we have to learn to doubt again; not to take for granted the promises made by the experts that a life with ambient technology makes our life easier and simple. We cannot give away the care for our futures in the hands of experts without questioning (Scheman 1993, p. 212, p. 216). As Scheman says, we have to search for these experts who can interconnect both to the trust notions of the past based on our

daily experiences and to our distrust notions based on the experiences we have made with technology. We have to create for ourselves trust experiences to overcome situations of indecisiveness to risk positions of design. Trust is not symmetrical and we need to distrust the trust experiences we have made ourselves and starting to negotiate with the actors behind the invisible technology. The cyborg of Haraway was an invitation for making a connection with technology but it was also a warning:

> „Modern machines are quintessentially micro electronic devices: they are everywhere and they are invisible“. It is this „ubiquity and invisibility of cyborgs why these sunshinebelt machine are so deadly. They are hard to see politically as materially. They are about consciousness. - or its simulation.“ (Haraway, p. 153)

In human consideration we should, doubtfully, deconstructively and critically explore the space between trust and distrust: Trust and distrust are not a dualism, but open for negotiations.

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