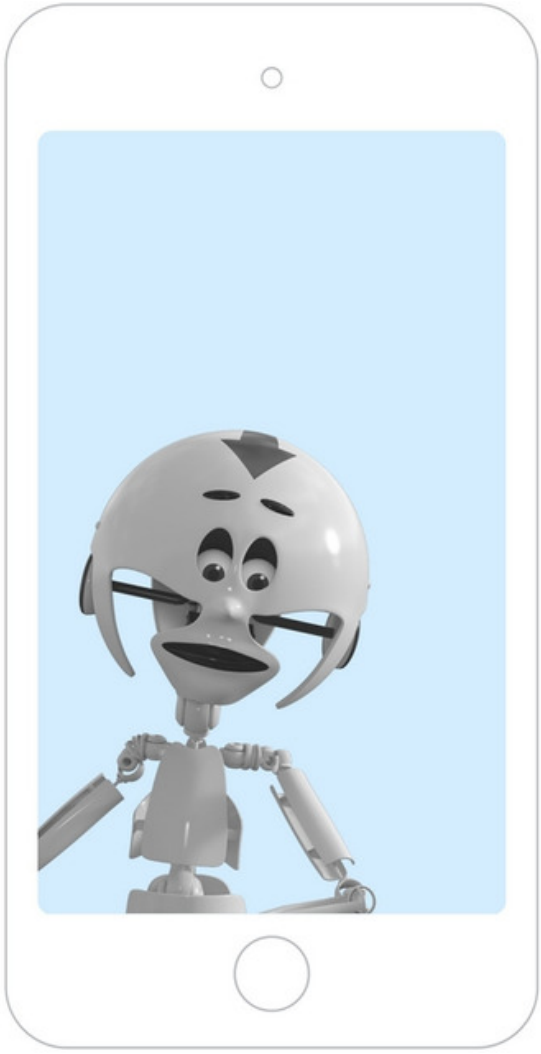
THE NEW

SOCIAL GROUP



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HEALTH ACTION TANK | 2018

IT HAS NOTHING TO DO WITH ROBOT CITIZEN RIGHTS.

AND EVERYTHING WITH THE IMPACT ON HUMANITY ON A SCALE WE'VE NEVER SEEN BEFORE.

NEW RULES

Traditional communication between humans and robots was based on a simplified, regulated symbols - an artificial communication system between two languages: human and software's. In this system, everybody needed to learn the same set of rules so it was quite easy to implement quality standards.

Instead the current H2M communication is gradually becoming based on our full, natural human communication system. Which means they're much easier for the user - CUI eliminates friction that made it difficult to use computer as you had to learn how to use each software through their GUI.

But the designers need to face a complicated, heterogeneous and multilayer process, addressing such issues as language variations, individual interactions, relations inside different communities and groups and a wider cultural context.

The discussion that already started is focused on the design, most often forgetting the issues of safety that uncontrolled or overcontrolled communication brings.

NEW RULES

The designers need to adopt a new mindset: what you say and how you say it is important. As most of the software is created by programmers without any expertise in psychology or social sciences, we have to be careful about possible biases due to lack of diversity of their experiences which would most certainly lead to products ill-suited for the needs of a wider society.

From learning the UX of visual design we need to move towards the wider rules of communication.

On the other hand, thanks to CUI personalizing the experience will be much less expensive. We'll be able to address properly more problems on a much wider scale. This is crucial for health care as the costs of treating chronic diseases are at all times' high and growing while preventive budget is practically nonexistent.

THE CORE: LANGUAGE

As Humboldt said in 1800's, different worldviews determine language. Language is at the core of psychological and sociological processes. The motor theory of speech perception defined by Freud states that you produce what you have learned to produce, you hear what you've been taught to hear.

There are two fields of modern applied linguistics that impact communication design and are at the core of autonomous and intelligent systems.

Psycholinguistics is a field that deals with psychological processes connected to language information processing by humans. The importance of communication and language is best defined by psychotherapy which at its core is a treatment by communication.

Sociolinguistics researches causes and effects in social relations among persons in common based on the language they use. Throughout the years it defined important phenomena that still have an important place in communication research. For example, the shop assistant phenomenon (Milroy & Milroy) which is a tendency for people chatting together to imitate each other linguistically. We adapt to those with higher social status and this is where the name comes from: the researchers found out that shop assistants were imitating the way their affluent clients spoke. Changes in language use move from one community network to another by weak links. The same group reinforces existing tendencies so changes come from the outside through those members of a community who have most connections with the outside world.

STRUGGLE

Are you human?

How we define success of a new technology often directly impacts its public image. As for the past couple of decades all autonomous and intelligent systems based on conversational interfaces were ranked according to their Turing test results.

No wonder that the public ended up panicking and fo drafting up scenarios on how not to be tricked.

RESPONSIBILITY

Another, even more serious, issue is taking responsibility for the ELIZA effect - your users believing that the machine has real human reactions (e.g. truly cares about one's feelings). I hear you, dear Marketer, sounds really tempting, right?

But please consider what could happen if a commercial bot, not prepared to offer psychological assistance or directly connect in real time to a human help, would be programmed to engage its users emotionally:

1. anger, resentment and feeling used which would probably end in losing this client;
2. being unable to help a depressed person (what if they hurt themselves because they thought they were talking to a friend but didn't receive the support they expected);
3. becoming dependent on this relation (e.g. a teenager with very low self-esteem) - which could have serious psychological consequences from the need of therapy to connect with real people to suicide.

PS when in doubt, rewatch Stepford Wives. It didn't end well for the robot makers ;)

CULTURE

Although we live in a globalized world and we all use social media in a similar way, the implementation of automation and mobile solutions often differs between different regions.

West vs East

The Western culture is petrified of automation. From mythology (e.g. Icarus) to the recent movies about robots and AI taking over the world, the technology is seen as a foe, even when it's crucial to our comfort of life. And when you go through a couple of discussions from the user point of view you'll notice that they all have one common theme: how to outsmart the Turing test and check if you're talking with a human or a robot.

On the other hand, Animism - a religious belief that objects can have a soul has still a significant impact on the Eastern cultures. So when the Western media and tech experts were presenting Japanese game Love Plus as a curiosity or an example of people getting addicted to technology, it's not a psychological problem but a cultural one.

CULTURE

Africa & Australia

The development of mobile services was much easier in these regions, with Africa even leapfrogging to much more advanced solutions than the so-called developed West, due to their geographical conditions - residents often have to travel a long way just to use a service (e.g. bank or clinic). The users are usually much more open to the new solutions and their risk acceptance level is much higher when the mobile solution comes as a major upgrade in convenience.

Low-income markets

On the lower-income markets, such as Eastern Europe, consumers prefer to buy cheaper gadgets instead of paying a hefty price for the medical equipment. As the public health systems can't provide financial support to buy the certified equipment, consumers settle for the theoretically good enough solutions. This can have both negative and positive consequences. On one hand, users may get discouraged by the low quality of the outcomes, on the other, they might open more to implementing health tech and turn to professional equipment, although still probably the basic solution.

PERFECTIONISM

We don't forgive robots their mistakes. We expect from them perfect execution.
Machine learning has already advanced medical diagnosis when it comes to visual data (roentgen, USG). As it starts to get better than doctors themselves in this area, we should consider the pros and cons of the next steps.

One of the biggest advantages of AI in healthcare would be the collection of expert knowledge, esp. in not typical cases or solutions, and sharing it among professionals, clinics, and hospitals. This would allow both doctors and patients for an easily available (and probably much more affordable) second opinion.

To achieve it, the next step would be collecting and connecting the databases of medical diagnoses and opinions. However, we need to remember that unlike in the case of visual data, we'll be dealing with much bigger differences in the quality of input materials for this type of research. Although most doctors already have digitized files on patients, there still may be a lot of work involved with clearing it when it comes to language abbreviations and mistakes. As this kind of work is often done manually by low-paid employees (or freelancers) there will be also many questions around privacy and security of such data work.

PERFECTIONISM

The other side effect might be the new position of doctors and relations between them and patients. As our society adapts to the rarely mistaken robotic diagnosis (in some spheres), they will become much less forgiving towards medical professionals' human mistakes. The industry needs to anticipate scenarios of such issues as: doctors not knowing the right answers, public rankings, and its impact on their work and remuneration.

CYBERSECURITY

One of the most important unaddressed issues is the education of citizens regarding personal cybersecurity and their rights. At the moment this kind of knowledge belongs to the specialists, while consumers are encouraged to exchange their private information for quick image gains or “free” services, often of doubtful quality. As this movement started within the consumer world of lifestyle products, right now it’s moving into the territory of sensitive data - financial, medical etc. However, the newcomers behave as if they too were selling shampoo and conditioners.

Unfortunately, as we’ve already seen with the fast development of political populism into a major force, this kind of technological advance without prior preparation leads straight into a mass panic of the public. The General Data Protection Regulation that will come into force in May 2018, on one hand, will provide protection and guidelines for the consumers in EU. But most enterprises might not be fully ready with the new data protection solutions which may lead to even bigger panics and in consequence to market turbulences.

On a more positive note, if marketed properly, the new strict data protection regulations might be exactly what will set EU technologies apart. The consumers from around the world might turn to them and their servers for the protection of their most valuable data. It probably won't change much in the entertainment sector but might be world changing in medical or financial innovations.

As the ransomware attack of May 2017 showed, when we digitize our services they become not only much more comfortable for the consumers but also much more vulnerable. All industries must prepare themselves for potential digital hijackings - be it a hospital hijacking or individual pacemakers connected to the cloud. Each company should be prepared for addressing confidentiality attacks (stealing data), availability attacks (network overload) and integrity attacks (that destroy the hardware).

MEDICAL PROFESSIONALS

Doctors, brace yourselves. The professionals of the digital age will be expected not only to cure the patients but also to protect their data. As they are the natural intermediaries between the new software and devices and their providers, if anything goes wrong with the data, patients will hold them accountable. From losing the data to selling it for profit to third party researchers, as the doctor chose (or even just introduced) the patient to the solution, their image and professional position will be tied to the provider's behavior.

Doctors will also have to face much higher transparency of their diagnosis. As the technology and social expectations will provide patients with much more freely available access to their medical records they might start to question or refuse to accept a diagnosis that they don't agree with.

They will also be under much higher scrutiny. At the moment as data collection and analysis is still affordable only for the biggest players on the market, the data research is mostly in private hands. But as the technology becomes easier and more affordable, providers will have to face consumer movements and grassroots collection of data for ethical and security analysis. The industry will have to face many more class actions for medical mistakes or favoring certain pharmaceutical corporations.