

FORSKNINGSPODDEN #80

Guest: Farzaneh Karegar

Interviewers: Nadja Neumann and Magnus Åberg

[00:00]

[Intro music: Light jazz]

Narrator: You're listening to Karlstad University's podcast Forskningspodden. Here you'll meet researchers that take you on a journey to explore science. The podcast is brought to you by the university library.

Magnus Åberg: Hello and welcome, my name is Magnus.

Nadja Neumann: And I am Nadja.

MÅ: And today we welcome Farzaneh Karegar back to Forskningspodden and to our studio. Welcome, Farzaneh.

Farzaneh Karegar: Hello. Thank you.

MÅ: You're a doctor of computer science, specialised in the field of human-computer interaction. And your research is focused on the question of how users can take control of their personal data online. The last time we met you was in 2018, when you had completed your licentiate thesis, and we actually recorded that interview on 25 May to be exact, which was the day the General Data Protection Regulation, or GDPR, took effect as law in all member states of the European Union. But the regulation itself came into force already two years earlier, in 2016, so for five years we have all lived with the GDPR so to speak, and you have conducted research on privacy issues online during almost the entire lifespan of the GDPR. So starting with a very general question: From your point of view, what are the most important developments we have seen when it comes to privacy online during this five year period?

FK: In my point of view, if we think for example about privacy policies on different websites and different service providers, there has been some development, there have been some positive things. If we think about privacy, for example, there were large scale empirical studies showing that nowadays more websites offer privacy policies to their users; they try to include GDPR terms in their privacy policies, and they're making more transparent that which has been done or is going to happen with users' data, and the purposes of data collection and data processing. However, although now we have more websites with privacy policies and the privacy policies each are more compliant legally, these policies are now even more complex and lengthy with more jargon words. So there are two sides of that. We can say there were endeavours to become compliant with the law; on the other side, users were missed in the whole design process. And there should be more improvement in this regard. Also, there is research on, for example, different kinds of applications on mobile devices and how they access resources on mobile devices, before and after GDPR. Our colleagues in Karlstad

University also did some research on that. And it shows that after GDPR we have more compliant mobile applications; they try to access resources in a better way, in a more privacy-friendly way. But there are still gaps, and we still have applications that access resources without a binding purpose. It's really important that we should have purpose limitations, and it means that services should just have access to the resources, the information that they really need for their task, to conduct or to accomplish their goals and their services. However, there are still, for example, some mobile apps that access resources they don't need to have access to offer different kinds of services to users. So they are not privacy friendly, in a sense. They mention it for example in their privacy policies, but if we take GDPR into account, and the need for purpose limitation, they have still lots of problems. So there have been lots of endeavours and developments, if we think about the fine that the GDPR imposes on the different services if they are not compliant. So there have been developments, but still, they are not as effective as intended by lawmakers, because users are missed in the whole design process.

[05:15]

MÄ: So there is still research to be done for you as a researcher.

FK: Yes, definitely.

NN: Yeah, and this is exactly what I was gonna ask, because your research focus is on empowering the user, and you write on the back cover of your thesis: "There is an increasing need for different social, technological, and legal solutions that empower users to take control of their data". Could you tell us a little bit more about this, exactly how it's done, and what you did in your research?

FK: Yes, sure. Maybe I can also make another example regarding the cookie consent, or cookie banners. After the GDPR, you've probably noticed that on every website you go to, now lots of pop-ups block your way, and you should say "Ok, I agree", or if you want to spend your time—or kind of waste your time, in some users' opinion—you should dig into different layers of that to find if you can make something out of it, like opting out of disclosing or sharing some kinds of cookies or not. So all of these cookie consents that we are overwhelmed with are the results of trying to become compliant with the GDPR but in the wrong way, not considering users into the whole design process. And about different legal, societal and technical solutions—because the GDPR touches upon different aspects—it says that all information that service providers should provide to the users should be in a concise and intelligible format. So somehow it also emphasises the role of the user and that you should take users into account; their cognitive capacity and their understanding and needs. Also there are some requirements and suggestions in the GDPR that touches upon the technical parts, that there should be some technical solutions to make sure, for example, that users' security and privacy are preserved. So if I want to connect the need for these solutions to my own thesis—we didn't focus on the technical part, so in my thesis we are trying to make a connection between the legal solutions and societal solutions. So we want to decrease the gap between the tools that are legally compliant and, at the other end of the spectrum, tools that are usable. So we need both of them, tools that are legally complaint and tools that are usable so users can achieve their goal effectively and in a short amount of time, while they are also satisfied about how they achieve their goal.

NN: Can I just ask you a question: Those tools, would that be something that the provider would have to use or are those tools that I would download on my computer that help me, like an interface that makes it easier?

FK: It's a very nice question, because when I talk about tools and solutions in my thesis we have both of them. There are some standalone tools that we call transparency enhancing tools at the user side, that users—individually, if they are willing—can download and benefit from. There are also some solutions that service providers should integrate into their own interfaces, for example when it comes to the consent forms, because consent forms are one of the legal bases that service providers rely on to process users' personal information. And we provide solutions to how to make these consent forms more usable, so users can pay more attention to what they are disclosing and for what purposes. And with these consent forms and the solutions related to them the role of the service provider—and their willingness to integrate these solutions into their whole system—is important.

[09:58]

MA: Well, let me ask you: How did you do it in your thesis? I mean, how do you work with the service providers and the users? Or is it only lab testing on your own, so to speak?

FK: Yeah, it's just lab studies, so we try to work on consent forms that we adopted from service providers, especially consent forms in the context of identity providers. When you want to sign up for different services you can use identity providers, for example social log-ins. You can sign up for a service using your Facebook account or your Google account, and then you see a dialogue, and we work on those dialogues: How we can make them more usable, so users at the first step pay attention to them, because understanding and comprehension and making informed decisions is not possible without paying attention. So at the first step you should pay attention. So we worked on techniques to see if we can involve users with these kinds of consent forms, to help them at the first step to pay attention, and then the others come after that.

NN: This is something that I have been thinking about, exactly when you have to log in to a new platform, and you can choose between using your Facebook account, your Instagram account—whatever you have—or sign up again. Do you have any recommendations or reflections on that? Because when I come to where I have to choose, I always sign up a new account because I think that's where I can limit access for these other providers to other things that I already have on other platforms so they can't make the connection. Is that logical thinking?

FK: Definitely. When you use these social log-ins to sign up for services, these platforms, for example Facebook and Google, knows what services you are signed up. So they can track you, they know that at this specific time Nadja, for example, signed up for this service, and of course they can make a profile on you and collect more information. From a privacy point of view it's better not to use them, but they are convenient. Sometimes people just use them because they are convenient, they are faster, you can sign up in just one or two clicks. If you want to go for what we call manual sign-up, you have to fill in your email address again and confirm your email address, so there are more steps involved. Again, it's like a trade-off between convenience and privacy, but of course you are right: From a privacy point of view they can easily make their profile of you bigger and bigger.

NN: I want to return to another question. The goal of your research was, as we said before, to empower users to have more control of their data. What do you think are the biggest hurdles, if you're thinking about social aspects, psychological aspects—and maybe you already touched upon that with regard to being lazy and not wanting to sign up—are there any technological hindrances or legal aspects? What do you think are the biggest hindrances for empowerment of the user?

FK: I think there are several things involved. One of the issues related, for example, to privacy policies is that users are not willing to read them. They just accept them and agree to them. We cannot just say that service providers are guilty here, because we have different stakeholders and they have different points of view. Users see their privacy policies as something that should be simple and inform them exactly of what they want from these policies, but service providers use them as a legal tool. They use privacy policies to show that they are compliant with law. Because of that, privacy policies become lengthy and complicated. So when service providers want to, of course, become compliant with the law—because there are severe consequences—I think that trends should change and they should also take users into account.

[14:43]

And at the other side I think that legal requirements are very broad and different interpretations from them could be derived. And service providers have their own ways to enforce, for example, the rules and regulations in the GDPR for the privacy policies, and different kinds of approaches. They are all legally compliant. But if you consider that the GDPR makes them a little bit more specific when it comes to implementation of the consent forms or the privacy policies, to give some kind of guidance or even make some requirements on the user side as well would solve some of the problems, I think, because there's research showing that small differences in design of the consent forms makes a big impact on the user side, for example on how they pay attention and on their understanding. So I think it's really important that besides having all of these legal requirements, policy makers also make at least some more concrete recommendations on the design parts as well, so it limits the interpretations that could be derived from the law. Again, if you think for example of the cookie consents, we have different kinds of them, and all of them can argue that they are legally compliant with the GDPR in some sense, but most of them are not effective at the user side. So if our research in the HCI community can have some impact on policy makers, on policies in general, I think it could help a lot to move forwards towards a direction where we remove some of the hindrances from the user's way to make informed decisions.

MA: Have we seen any of that so far, do you think? I mean, that the policy makers are influenced by the research you do?

FK: I'm not aware of that. At least in our community, in usable privacy, and of course GDPR hasn't been impacted in this—not impacted, that's not the correct word—so if I want to say... How to phrase it... For example Article 29 Working Party: It's not a rule, it's not a legal document that you should comply with, but they are trying to make some clarifications on different rules and requirements, and they also sometimes take users into account, and they go in a direction that gives you more clarification, about what you should do and what you shouldn't do, but I think it's not enough. Article 29 Working Party guidelines and recommendations are still very broad as well. There are some movements to cover the limitations that exist regarding the vagueness of the rules and requirements in the GDPR but still it's not enough.

MA: I was also thinking about the other side of it, the companies. What are their interest in this? I mean, are they interested at all, because what do they have to gain other than, sort of,

not getting fined? Are there any incentives for them to develop their privacy policies and their tools to help users?

FK: I'm not sure exactly about how people high in the companies' hierarchy think but I think there are different points of view. Some of them may think that if they become completely transparent with the users and inform them that what exactly they are collecting from them and for which purposes, then users are not willing to disclose their data anymore. And data is a very valuable asset; they rely on users' data, different kinds of data, especially data that they use for tracking users. And when it comes to advertisements and all of these things, they think that if they comply with GDPR in a sense that also take users into account, and become completely transparent, they will probably lose the market, and they cannot collect information. But I think that's not the correct way of thinking, because you never know: If users are exposed to transparent information in a simply structured way so that they can find what they want, they can opt out from what they want, or opt in—not opt out, because that's also not compliant with GDPR—for different pieces of information that they want to disclose for different purposes, then it may increase their trust in a service provider. And having trust in a service is really important. When you trust something you are more willing to disclose your information, so there are two sides to that. If people within the companies think that becoming compliant with the law in a way that also really takes users into account is a hindrance for their business, they haven't tried it and they haven't seen the trust that can come with transparency.

[21:19]

NN: Could I just ask a question in regard to this, because I was thinking: You're talking about the trust of the user, but how big is the awareness of the users actually, with regard to the policies that exist? Because from my perspective—and I don't know, this is a really layman assumption—I think a lot of people just click the box, and they don't even know what they sign away, and what they say yes or no to. So, do you think this is an important aspect really, in building trust: like the policies?

FK: I'm not sure if I understood your question correctly, but we are not saying that with this current state of privacy policies service providers can create trust, no. Because as I said, even for having trust at the first step you should have the attention of the users to what you offer to them. And without attention of course awareness and comprehension also doesn't follow. So for example, in my thesis, what we did was to focus on the attention part to see how we can solve the first step, how we can catch users' attention into consent forms for example. And for example, can I just go to the direction of my thesis?

NN: That would be brilliant, so you could just maybe let us know the most important results?

FK: That would be great. So, part of my research—because we have different tools and solutions—is related to service providers. And the results of that should eventually be adopted by service providers because it's about the consent forms. We tried to involve users with the content of the consent forms. For example with the information about what is going to be collected about you and for which purposes. And also we inform users—we didn't involve them with the other conditions of the consent—but at the first layer we put the most prominent or important information for them to make informed decisions. And we focus on different interaction types, interaction techniques: checkboxes, drag-and-drops, swiping. And we tried to see if involving users in different ways can make a difference in their attention. If I talk about our study design: We had different groups, and in each group users just experienced one of these interaction techniques. For example, with check boxes they had to select what information they wanted to disclose for which purposes, and in the other group, for example drag-and-drop, they had to drag the information that they wanted to share and drop them in the areas for different purposes. So in this way they had to select what information they wanted to be shared for which purposes. And we had the swiping group that had to swipe over

the purposes that they wanted to be selected, and the control group that were not involved at all.

And then we saw that active engagement with the content can really help people to pay attention to the consent forms, and people in drag-and-drop, swipe, and the checkbox group paid much more attention to the information that they wanted to share, and also the purposes. However, we also checked the habituation. It's not enough that you pay attention the first time. When we catch users' attention we should be able to maintain their attention. However it's very difficult to maintain users' attention, because of habituation. So, in our research we also studied afterwards the effects of habituation on the effectiveness that we achieved from active engagement with the consent forms. And we saw that after repeated exposure to the consent forms we didn't see any difference between the groups regarding their attention. So they were equally successful at paying attention on different parts. So we saw that although habituation decreased the number of eye fixations on different parts and also decreased the time to handle different consent forms—for example, after fifteen consent forms it took much less time from users to handle that—this habituation process helped them to more effectively and efficiently react and handle the consent forms. So during this process they learned to what parts of the consent form they had to pay attention to be able to make informed decisions. So we assume that habituation can be positive if we have uniform consent forms with identical layouts between different service providers.

[26:52]

Again, if we take cookie consent into account, now we have different kinds of layouts, and if you for example spend time on this website, and a specific layout, it will not help you on other websites, because it's different, with different kinds of information, different kinds of layout, buttons, colours. However, our research revealed that uniform consent forms, if they have identical layouts, can really help people to learn gradually and easily in a very short time to what parts they should pay attention, and in this way we can benefit from habituation as well.

MA: That's super interesting, because it sounds kind of counter-intuitive that more standardisation actually helps users to keep their awareness about this.

FK: Exactly. It was also interesting when we were analysing our results. And we should pay attention that here we have active engagement of the users. If we do not have active engagement and it's just identical layouts we cannot benefit from the habituation. But if we have active engagement and they have to react to the content of the consent forms, and also they know to what parts they should pay attention, they learn it gradually when they are exposed to different consent forms. And it really helps. But again, we also have some recommendations on what kind of engagement, or how these kinds of engagement should be employed, because the type of the engagement, and for what kind of information you use this kind of engagement, is also important when you want to catch users' attention.

NN: Could you elaborate a little bit, what it looked like?

FK: Yes. For example, our results show that for frequently reappearing consent forms, checkboxes suffice for catching users' attention, because after the habituation period we observed that there was no difference between different groups. So we don't need to bother users with more complicated action modes like drag-and-drop. But for consent forms that they are shown seldom or once in a while, we recommend designers to use drag-and-drop, because for the first exposures to the consent forms, drag-and-drop is much more helpful to catch their attention. Also, we recommend designers to use a uniform type of engagement, a uniform type of interaction: For example, you shouldn't use check-boxes for some kinds of information and drag-and-drop for others, because in this way you catch users' attention to some parts more than the other parts. If you have substantial policy information that users

should pay attention to in order to make informed decisions you should use the same type of interaction to engage users with all of the substantial information.

[30:19]

MA: Who do you hope will read your thesis?

FK: Policy designers at the first step. I hope that they read my thesis, because there are several recommendations, not only related to the consent forms, but also related to privacy notifications, that can help users to act upon their data—that these privacy notifications are part of transparency enhancing tools. And I hope that policy designers read my thesis, and afterwards policy makers. Because I wish that somehow our research in this community, in general usable privacy, can have a good impact on policy and policy makers.

NN: Do you think there could be a policy for policy makers on how to make their policies, like an overarching European kind of guideline?

FK: I really don't know. I lack knowledge in this area, so I shouldn't comment on that, but there are lots of barriers, especially to impact from HCI community on policy makers, because when it comes to qualitative studies it's very hard. I read some papers that were discussing the barriers, and sometimes it's hard to convince them based on small-scale studies that are just based on qualitative data and also a small group of people. So I think maybe the methodology should also change, the methods that we apply in our research. We should always try to discuss the validity of the results and the reliability, and to what extent it can be generalised. So if we argue that the results in this community can be generalised to the whole population, maybe then policy makers are also more willing to rely on this result. But if you just publish, for example, some results based on a small group of people, there are always lots of limitations about the population that you had: the sample size and the characteristics of the people that you had. So it's hard to argue: If it goes into the policy, what happens for different groups of people in different countries?

NN: Very complex field and question, really. Farzaneh, our time is almost coming to an end, but is there anything that we forgot to ask you that you would like to highlight for our listeners with regard to what you have done?

FK: I also wanted to mention dark patterns, because what we've done in our research regarding engaging users—showing that it's effective and it could help people to pay more attention to what they disclose for which purposes—is valid as long as we do not have dark patterns. And dark patterns means using interfaces that are carefully crafted to deceive people, to move them into a direction where they for example disclose more information, and if the dark patterns didn't exist they wouldn't do that. And the dark patterns are very prominent, and we have lots of dark patterns involved in, again, cookie consent banners. And as long as we have dark patterns, the engagement cannot be effective. Even the engagement in the policy information or in the consent forms can be used in a way that trick users. For example, the drag-and-drop that we tested: It's more effective to catch users' attention to what they drag rather than to the places that they drop the dragged items to. So even policy designers may use drag-and-drop in a way that we assume is a dark pattern, because the substantial information may be on the drop part rather than the drag part. And then users pay attention more to the drag part rather than to the drop part. So because of that we have some recommendations on how these interaction techniques can be used, and dark patterns nowadays are very common and there is lots of research ongoing on how we can avoid it, and how we can even inform users about dark patterns.

[35:18]

NN: Could you, just to wrap it up, say what these recommendations are, to recognise the dark...?

FK: We don't have a recommendation to recognise dark patterns, but one of our recommendations was about using drag-and-drop in a way that doesn't lead to a dark pattern. So if policy designers want to use drag-and-drop to catch users attention, all substantial information should be dragged rather than be the target for the drop action. So that was the recommendation that we gave to the policy designers as part of our thesis.

NN: OK. Great, thank you. Very warm thank you, Farzaneh, that was very, very interesting, and it was cool to have you on Forskningspodden again.

FK: Thank you.

NN: Good luck with your upcoming research, because you are going to continue...

FK: Yes.

NN: Even though in a little bit of a different direction. And to our listeners, very warm thank you for staying tuned, and welcome back next time.

[Closing music: Light jazz]

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