Freie Universität Berlin, Institut für Informatik, Arbeitsgruppe Software Engineering Prof. Dr. L. Prechelt, V. Brekenfeld, P. Müller, H. Kneiding, J. Pfannschmidt

Übungsblatt 2 **Technikfolgenabschätzungen vs. -bewertungen** zum 04.03.2020

## **Aufgabe 2-1: Begriffe**

Erinnern Sie sich an die Vorlesung vom Dienstag und versuchen Sie eine Definition der folgenden Begriffe:

- a) Was ist der Unterschied zwischen Verfügungswissen und Orientierungswissen?
- b) Grenzen Sie Technikfolgenabschätzung von Technikfolgenbewertung ab.
- **c)** Was meint Dijkstras Forderung nach einer "firewall" (Brand-/Schutzmauer)? Ist diese Forderung sinnvollerweise umsetzbar? Warum bzw. warum nicht?

## **Aufgabe 2-2: Textanalyse**

Auf den nächsten Seiten folgt ein Auszug aus einem Text von Facebooks CEO (und damit Technikgestalter) Mark Zuckerberg von Mitte Februar 2017.<sup>1</sup>

- **a)** Lesen und verstehen Sie den Auszug (wenn Sie wollen, können Sie zur Orientierung auch zusätzlich die Einleitung oder den gesamten Text online lesen).
- **b)** Gehen Sie den Text strukturiert durch und suchen Sie gezielt nach Aussagen Zuckerbergs, die in eine der folgenden vier aus der Vorlesung bekannten Kategorien fallen:
  - 1. Welche Wirkungen und Phänomene schreibt Zuckerberg Social Media und Facebook zu (im Sinne von Technikfolgenabschätzungen, nicht von -bewertung)?
  - 2. Wie bewertet er jeweils diese Folgen?
  - 3. Welche Handlungsoptionen beschreibt er für Facebook als Technikgestalter, um mit diesen Folgen umzugehen?
  - 4. Welche Folgen erwartet er wiederum von der Umsetzung dieser Möglichkeiten?
- c) Stellen Sie Ihr Analyse-Ergebnis übersichtlich dar, z.B. in Form einer Tabelle mit vier Spalten, in der jede Zeile eine Folge mit Bewertung, Handlungsoption(en) und jeweils deren erwarteten Folgen. Geben Sie jeweils den Absatz an, in dem zugehörige Aussagen zu finden sind.

**Hinweise**: Manche Folgenabschätzungen, -bewertungen, etc. tauchen in mehreren Absätzen auf. Fassen Sie diese geeignet zusammen.

Zumindest für alle negativ bewerteten Folgen nennt Zuckerberg ein oder mehrere Handlungsoptionen und schätzt auch deren Folgen ab – es sollte in Ihrer Tabelle also nur wenige Lücken geben.

- **d)** Welche der Folgenabschätzungen (also Kategorien 1 und 4) halten Sie für plausibel, zwiespältig oder unrealistisch? Begründen Sie Ihre Antwort.
- **e)** Nehmen Sie die Technikgestalter-Rolle ein: Welche anderen Handlungsoptionen fallen Ihnen ein?

 $<sup>^1\</sup>mathrm{Den}$  Text in voller Länge finden Sie online hier: https://www.facebook.com/notes/mark-zuckerberg/building-global-community/10154544292806634

## **Informed Community**

- (1) The purpose of any community is to bring people together to do things we couldn't do on our own. To do this, we need ways to share new ideas and share enough common understanding to actually work together.
- (2) Giving everyone a voice has historically been a very positive force for public discourse because it increases the diversity of ideas shared. But the past year has also shown it may fragment our shared sense of reality. It is our responsibility to amplify the good effects and mitigate the bad to continue increasing diversity while strengthening our common understanding so our community can create the greatest positive impact on the world.
- (3) The two most discussed concerns this past year were about diversity of viewpoints we see (filter bubbles) and accuracy of information (fake news). I worry about these and we have studied them extensively, but I also worry there are even more powerful effects we must mitigate around sensationalism and polarization leading to a loss of common understanding.
- (4) Social media already provides more diverse viewpoints than traditional media ever has. Even if most of our friends are like us, we all know people with different interests, beliefs and backgrounds who expose us to different perspectives. Compared with getting our news from the same two or three TV networks or reading the same newspapers with their consistent editorial views, our networks on Facebook show us more diverse content.
- (5) But our goal must be to help people see a more complete picture, not just alternate perspectives. We must be careful how we do this. Research shows that some of the most obvious ideas, like showing people an article from the opposite perspective, actually deepen polarization by framing other perspectives as foreign. A more effective approach is to show a range of perspectives, let people see where their views are on a spectrum and come to a conclusion on what they think is right. Over time, our community will identify which sources provide a complete range of perspectives so that content will naturally surface more.
- (6) Accuracy of information is very important. We know there is misinformation and even outright hoax content on Facebook, and we take this very seriously. We've made

- progress fighting hoaxes the way we fight spam, but we have more work to do. We are proceeding carefully because there is not always a clear line between hoaxes, satire and opinion. In a free society, it's important that people have the power to share their opinion, even if others think they're wrong. Our approach will focus less on banning misinformation, and more on surfacing additional perspectives and information, including that fact checkers dispute an item's accuracy.
- (7) While we have more work to do on information diversity and misinformation, I am even more focused on the impact of sensationalism and polarization, and the idea of building common understanding.
- (8) Social media is a short-form medium where resonant messages get amplified many times. This rewards simplicity and discourages nuance. At its best, this focuses messages and exposes people to different ideas. At its worst, it oversimplifies important topics and pushes us towards extremes.
- (9) Polarization exists in all areas of discourse, not just social media. It occurs in all groups and communities, including companies, classrooms and juries, and it's usually unrelated to politics. In the tech community, for example, discussion around Al has been oversimplified to existential fearmongering. The harm is that sensationalism moves people away from balanced nuanced opinions towards polarized extremes.
- (10) If this continues and we lose common understanding, then even if we eliminated all misinformation, people would just emphasize different sets of facts to fit their polarized opinions. That's why I'm so worried about sensationalism in media.
- (11) Fortunately, there are clear steps we can take to correct these effects. For example, we noticed some people share stories based on sensational headlines without ever reading the story. In general, if you become less likely to share a story after reading it, that's a good sign the headline was sensational. If you're more likely to share a story after reading it, that's often a sign of good in-depth content. We recently started reducing sensationalism in News Feed by taking this into account for pieces of content, and going forward signals like this will identify sensational pub-

- lishers as well. There are many steps like (14) Connecting everyone to the internet is also this we have taken and will keep taking to reduce sensationalism and help build a more informed community.
- (12) Research suggests the best solutions for improving discourse may come from getting to know each other as whole people instead of just opinions - something Faceconnect with people about what we have in common - sports teams, TV shows, interests – it is easier to have dialogue about what we disagree on. When we do this well, we give billions of people the ability to share new perspectives while mitigating the unwanted effects that come with any new medium.
- (13) A strong news industry is also critical to building an informed community. Giving people a voice is not enough without havformation and analyzing it. There is more we must do to support the news industry to make sure this vital social function is sustainable - from growing local news, to developing formats best suited to mobile devices, to improving the range of business models news organizations rely on.

- necessary for building an informed community. For the majority of people around the world, the debate is not about the quality of public discourse but whether they have access to basic information they need at all, often related to health, education and jobs.
- book may be uniquely suited to do. If we (15) Finally, I want to emphasize that the vast majority of conversations on Facebook are social, not ideological. They're friends sharing jokes and families staying in touch across cities. They're people finding groups, whether they're new parents raising kids or newly diagnosed patients suffering from a disease together. Sometimes it's for joy, coming together around religion or sports. And sometimes it's for survival, like refugees communicating to find shelter.
- ing people dedicated to uncovering new in- (16) Whatever your situation when you enter our community, our commitment is to continue improving our tools to give you the power to share your experience. By increasing the diversity of our ideas and strengthening our common understanding, our community can have the greatest positive impact on the world.