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Designing for Meaningful Interactions and Digital Wellbeing

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ABSTRACT

In the contemporary attention economy, tech companies design the interfaces of their digital platforms by adopting attention-capture dark patterns to drive their behavior and maximize time spent and daily visits. Two popular examples are viral recommendations and content autoplay on social networks. As these patterns exploit people's psychological vulnerabilities and may contribute to technology overuse and problematic behaviors, there is the need of promoting the design of technology that better align with people's digital wellbeing. This workshop seeks to advance this timely and urgent need, by inviting researchers and practitioners in interdisciplinary domains to engage in conversation around the design of interfaces that allow people to take advantage of digital platforms in a meaningful and conscious way.

CCS CONCEPTS

• **Human-centered computing** → *Human computer interaction (HCI)*; **Collaborative and social computing**.

KEYWORDS

digital wellbeing, attention economy, digital self-control tools

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1 INTRODUCTION

Nowadays, tech companies adopt “attention-capture” dark patterns [5] like recommendations and content autoplay to grab people's attention and maximize the time spent on different digital services, from social networks to video sharing platforms [3]. Such a controversial business model exploits people's psychological vulnerabilities to increase advertisements revenue, and has several measurable consequences on individuals' sense of agency, often

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resulting in people's lack of control over technology use [5]. In this context, public media [1, 2] and researchers in different areas, from philosophy [4] to HCI [7], agree on the importance of considering a new kind of psychological *digital wellbeing*. Traditionally, practitioners and researchers have addressed the problem of supporting people's digital wellbeing by designing and implementing Digital Self-Control Tools (DSCTs) [6], i.e., mobile apps and web browser extensions that allow users to track their usage patterns and define interventions, e.g., timers and lock-out mechanisms, to self-monitor device use. Unfortunately, different studies have demonstrated that contemporary DSCTs are not always effective, especially in the long term. Indeed, the adopted intervention strategies are rather simplistic, and indiscriminately block the user's interaction, e.g., by blocking the usage of an app for the rest of the day. Furthermore, they strongly rely on users' self-monitoring strategies and capabilities, only [7].

The purpose of this workshop is to provide the academic and industrial communities a venue for discussing ongoing research and ideas on the design of interfaces that allow people to take advantage of digital platforms in a meaningful and conscious way, without the need for external interventions (e.g., timers) that indiscriminately block the user's interaction. This could be done with either novel Digital Self-Control Tools (DSCTs), which allows people to limit their technology use through the redesign of interactive elements, or by finding ways to motivate key stakeholders to avoid or mitigate attention-capture dark patterns from the beginning of their design processes.

2 TOPICS OF INTEREST

The topics of interest for the workshop include, but are not limited to:

- definition and analysis of attention-capture dark patterns;
- novel interfaces for meaningful interaction;
- novel DSCTs that focus on redesigning the user's interaction rather than blocking it;
- design methods and tools for digital wellbeing;
- strategies and tools for measuring people's digital wellbeing;
- responsibility and role of tech companies;
- social, educational, and political factors.

3 EVENT FORMAT

Table 1 summarizes the program of the workshop. In general, it will be oriented towards discussions, hands-on sessions, and presentations. In the beginning of the workshop, participants will be welcomed and introduced to the workshop’s goals and organizers. The rest of the first half of the workshop will be dedicated to the presentation of accepted position papers. Participants will be encouraged to provide short but provoking presentations that tackle questions in line with the workshop goals. They will be provided a 10-minute time slot for presentation and Q&A. In the second half of the workshop, we will carry out an affinity diagramming phase with the aim of identifying critical aspects on the workshop themes. Then, we will perform a brainstorming activity and co-design exercises, where groups of participants deepen a theme and try to find possible solutions to the identified problems. Finally, each group leader will present and discuss the results of their work. The workshop will be wrapped up with a discussion of ways to move forward. This can include initiation of joint publications, organization of a new edition of the workshop, and journal special issue on the topic. Virtual participation will be made possible. Here is a tentative schedule:

Table 1: Workshop organisation

Time	Activity
2:30-2:45	Welcome and introduction
2:45-4:00	Paper presentations
4:00-4:15	Coffee break
4:15-5:00	Affinity diagram and co-design exercises
5:00-5:45	Brainstorming and discussion
5:45-6:00	Summaries and Closing Remarks

3.1 Target Audiences

Potential contributors and attendees are researchers and practitioners in the research area of HCI and psychology. We believe that the workshop will be of particular interest to the AVI community, as it focuses on user interfaces and how to improve them to promote people’s digital wellbeing.

4 ORGANISERS

Alberto Monge Roffarello is a postdoctoral research assistant at the Department of Control and Computer Engineering (DAUIN) at Politecnico di Torino, in Italy. His research targets the end-user personalization of smart devices, online services, and user’s behaviors with these technologies. In his research, he investigated end-user personalization in different domains, ranging from end-user development in IoT ecosystems to novel digital self-control tools and approaches for digital wellbeing. He is an IEEE-HKN and ACM member.

Luigi De Russis is an Assistant Professor at the Department of Control and Computer Engineering (DAUIN) at Politecnico di Torino, in Italy. His research investigates how to overcome challenges in interaction between humans and computers, especially in those cases in which the interaction happens in complex settings (e.g., as within IoT systems). In his research, he experienced

IoT systems in different domains, ranging from the smart home to health-related contexts. During his Ph.D., he was Department Editor of the ACM XRDS (Crossroad) student magazine and, currently, he serves as an Associate Editor for the International Journal of Human-Computer Studies (IJHCS). He is also an IEEE, IEEE-CS, and ACM member. He serves as an Adjunct Chair in the ACM SIGCHI Executive Committee.

R X. Schwartz is a G. Cert/B.S.E. student in the Cybersecurity Management and Systems Engineering programs at University of Virginia. His research interests are in digital wellbeing and human-centered design with an emphasis on scalable interventions. He has previously worked for 1.5 years as a data analyst for the Colorado Department of Public Health and Environment, with a focus on COVID-19 data processing and analytics. He is an ACM member.

Panagiotis Apostolellis is a full-time Assistant Professor in the Computer Science Department at the University of Virginia. <your research interests> While a graduate student at Virginia Tech (2011-2017), he worked at the Center for Human-Computer Interaction, researching the impact of audience interaction using serious games and VR on young student audiences visiting informal learning spaces. Panagiotis also has extensive experience as a Senior Interactive Systems Designer and Developer at a cultural institution in his home country, Greece (2000-2011).

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