

Fostering Eudaimonia: Design to Support Virtues and Practical Wisdom

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Abstract

We live in a time when unprecedented technological abundance stands in a perplexingly stark contrast to a precarious future, declining mental health and increasing disengagement from work. Past work has emphasized positive user experiences as a desirable design goal in designing interactive systems. Yet, researchers argue that to flourish, we need to cultivate phronesis, or practical wisdom which results from a successful integration of virtues, or character strengths. The design of technology embeds value judgments about what is worthwhile, and to the extent that interactive technologies can both positively and negatively shape our decisions, influence our motivations, and form our habits, the question arises: how can we design them to help us inculcate those patterns of thought and behavior which contribute to our ability to use technological affordances prudently and cultivate well-being supportive virtues? The aim of this one day in-person workshop is to bring together researchers to deepen our understanding of the overlap between design, flourishing and the role of virtues, and develop fruitful avenues for further research and collaboration.

CCS Concepts

• Human-centered computing \rightarrow HCI design and evaluation methods; HCI theory, concepts and models.



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Keywords

Well-Being, Eudaimonia, Virtues, Human Technology Interaction, Design

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1 Motivation

1.1 Can we flourish without virtues?

We generally expect that technological abundance and a life of modern conveniences should allow us to lead our best, happiest lives. However, research suggests that in the last 20 years, psychological well-being across several age groups in countries considered enjoying a high standard of living continues to decline. Indicators include increased rates of depression, anxiety and self-harm [26, 36], increased days of ill mental health [1] and a loss of engagement and motivation at work [16, 17]. If the pursuit of happiness is a universally valued human goal, instead of nearing it, it seems that we have veered away from it.

Researchers clarify that when we talk about 'happiness', we are referring to two different kinds of positive evaluations of our mental states. On the one hand, we can refer to positive subjective feelings (feeling well, or pleasure, satisfaction, and enjoyment, also known as *hedonic* or subjective well-being [29]). On the other hand, whether we feel we are doing well in life rests upon a more comprehensive view of our motivations and activities. This form of psychological

well-being relates to the Aristotelean concept of *eudaimonia*, or *flourishing* [7, 19, 30]. The consensus is that while pleasurable states are easier to attain in the short-term, they not sustainable [19, 22, 32]. Rather, sustainable psychological well-being requires us to *do well* [25] in life, and it consists in being motivated to pursue intrinsic *human goods, or ends* (for example, *meaning/purpose, authenticity, excellence*, and *close relationships* [12, 20, 30]). In workplace contexts, eudaimonia is expressed by markers such as engagement, creativity, inspiration, commitment, increased initiative, and reduced stress [8, 33, 35].

While the aforementioned ends are all desirable, the question is, how do we attain them? Some emphasize the role of autonomously setting motives that are aligned with these goals [18]. Yet, others argue that these cannot be attained without moral excellences, also known as virtues [11, 12]. This is because, as autonomous individuals, choosing what to pursue and how to act in everyday practical situations requires us to develop the ability to evaluate whether our motives and actions are good, desirable, and worth pursuing (the virtue of phronesis) with respect to the kind of person we want to be [24]. We are not born with this ability [11], and even as adults, our reasoning is often hindered by perceptive and cognitive biases which prevent us from reliably predicting what is good for us in the long term [14, 31]. In various stages of life and in various domains of activity (e.g., playing a sport), as we grow individually, we learn from others how being good at something is exemplified in their behavior (how they play), and which excellences a good person in any particular role exhibits (sportsmanship) [10, 24]. Hence, maintaining conditions that contribute to our, and others' flourishing in any domain, requires us to maintain our conduct by approximating certain ideals constituting an overarching moral framework [24]. Since individual goals are often nested in successively broader domains of one's close relationships, workplaces, and the community at large, moral excellences or virtues such as care, benevolence, generosity, courage, honesty, integrity, fairness, phronesis, etc. [11] sustain the practices of giving and receiving which underlie flourishing [24]. Research from psychology shows that virtues do indeed play a role in flourishing in various domains [2, 6, 40].

1.2 Design for, and with virtues

Interactive technologies afford particular ways of thinking, valuing, and acting [38], but the question is whether they can reciprocally foster or hinder individuals' abilities to cultivate virtues, or character strengths. In the last two decades, mobile devices and connectivity have become ubiquitous, and the range and functional abilities of the affordances they can sustain have increased. Unfortunately, these advances have not directly contributed to our well-being. As an example, research has revealed that, from 2010 onward, disturbingly increasing rates of anxiety, depression, and self-harm among adolescents and young adults not only correlate with, but have been actively caused by mechanisms embedded in social media applications [15]. However, studies before 2010 seem to suggest that social media was beneficial to those who already had interpersonal social and moral competencies [27]. This implies that firstly, the impact of design decisions taken today may not be immediately apparent, and secondly, technologies can be premeditatedly designed to exploit our vulnerabilities that harm well-being

[4, 41] ¹. Thirdly, using technology for flourishing rests upon prudent judgment and the cultivation of moral competencies [23] as excellences which help us choose our goals and behaviors prudently in everyday situations based on whether and how they promote or hinder our ability to flourish [3, 24]. We are already witnessing the emergence of even more transformational technologies, such as generative artificial intelligence. A significant challenge lies in developing our ability to choose goals that are good, desirable, and worth pursuing, and develop the practical reasoning (or phronesis) to use technological affordances prudently [37, 38]. Hence, it is crucial to investigate how we, as designers and contributors to the technological landscape, could direct the ever expanding technological abundance in personal and professional settings towards flourishing by including factors contributing to it as both the aims and components of the design process itself. The topic has been recognized as one of the grand challenges of design [34].

We previously summarized 21 frameworks and heuristics aimed at designing for eudaimonic well-being [9], but our review shows that the development of virtues has not yet been extensively explored as a psychological disposition ². Fortunately, existing research on virtue from various viewpoints offers several starting points. For instance, Fower's [13] model of virtue proposes four components: knowledge (about virtues), developing the intrinsic motivation (to act virtuously), enacting the behavior and reasoning practically and independently to act according to the situation. Wright et. al. [42] have proposed a model that places importance on the development of phronesis as a psychological capacity to be motivated by the right reasons and choosing the appropriate action in response to a trigger. From a philosophical perspective, Vallor [37] has proposed a list of twelve technomoral virtues to be cultivated to develop and use technologies wisely: honesty, self-control, humility, justice, courage, empathy, care, civility, flexibility, perspective, magnanimity, and technomoral wisdom. Vallor further suggests inculcating several core practices that could help us develop these virtues:

- Relational understanding of our interdepedence as members of a community.
- Reflection on one's state now in relation to a future imagined self.
- To be intrinsically motivated to cultivate oneself morally.
- Paying attention to the moral nature of everyday situations.
- Deliberating and choosing the most appropriate course of action conducive to flourishing.
- Extending moral concern to others.

The main aim of this workshop is to explore how we could use these theoretical starting points to design and evaluate future technologies, thus providing a valuable avenue for research. The next section explains the anticipated outcomes in detail.

2 Anticipated Outcomes

We have two specific, overarching goals in mind:

 $^{^1\}mathrm{Regulation}$ may help, but comes with its own challenges [41]

²Positive design contains virtue, but as affordances for ethical action through nudging – the crucial psychological aspects of motivation and development of virtue as personal character needs further exploration.

- (1) Interdisciplinary Research Avenues for Cultivating **Virtues through Design**: The core aim of the workshop is to bring together researchers to discuss and clarify how phronesis (and other virtues) can be analyzed as motivation, behavior, and disposition in conjunction with technologymediated action to derive methodologically sound principles for guiding design. Specifically, we want to explore how design contributes to or hinders users from developing motivations and exercising virtues and practical wisdom that are crucial to flourishing, how designers can include virtues as guideposts in their design process, and how the effects of these design decisions could be evaluated empirically. On a broader level, we would like to identify promising research opportunities for interdisciplinary research and collaboration to better understand flourishing and virtues with an eye towards developing strategies that help users adopt such motives and behaviors. Concrete questions may include:
 - The scholarly position on virtues is that they are skilled behaviors that can be developed through practice [13]. Which patterns and behaviors in using technology support or hinder the cultivation of practices that can support the development of virtues in work or in personal lives? What are the resources that are required to sustain virtuous activity in everyday settings, and how they could be harnessed for design?
 - How does design enable or hinder the development of phronesis, or practical wisdom?
 - How can virtuous behavior be systematically studied in embedded, everyday practices to generate ideas for design?
 - How could design operationalize practices that generate awareness and knowledge about virtues, motivate users to act virtuously, and support virtuous behavior? For example, mental health researchers have highlighted the potential of technological services to provide interventions [5, 26, 39].
 - What are the facilitators/barriers to including virtues in the design process? How can designers and stakeholders develop a shared understanding of virtues via participatory approaches to design?
 - Designing in professional settings can be even more tenuous due to disagreements among stakeholder perspectives [21]. How do we resolve these tensions?
- (2) Publications and Increased Visibility: Post workshop, our aim is to first outline a research agenda which highlights the work that is already being performed as well as the questions that still need resolving. This we want to achieve in the form of a joint publication, which could rely on actionable insights gleaned in the workshop and/or a combination of various viewpoints raised by participants, highlighting the multifaceted nature of design for and with virtue. Next, we also wish to provide visibility to participants' ongoing research. The workshop submissions can also be published

at CEUR-WS.org 3 , and we will gather longer research contributions as a Springer book volume 4 .

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References

- [1] 2024. Sick days index due to mental illness Germany | Statista statista.com. https://www.statista.com/statistics/1372953/sick-leave-index-mental-illness-germany/. [Accessed 06-02-2025].
- [2] Austen R. Anderson and Blaine J. Fowers. 2020. An Exploratory Study of Friend-ship Characteristics and Their Relations with Hedonic and Eudaimonic Well-Being. *Journal of Social and Personal Relationships* 37, 1 (Jan. 2020), 260–280. doi:10.1177/0265407519861152
- [3] Julia Annas. 2011. Intelligent virtue. Oxford University Press, Oxford; New York. OCLC: ocn687683328.
- [4] Kerstin Bongard-Blanchy, Arianna Rossi, Salvador Rivas, Sophie Doublet, Vincent Koenig, and Gabriele Lenzini. 2021. "I am Definitely Manipulated, Even When I am Aware of it. It's Ridiculous!" - Dark Patterns from the End-User Perspective. In Designing Interactive Systems Conference 2021. ACM, Virtual Event USA, 763–776. doi:10.1145/3461778.3462086
- [5] Stephany Carolan, Peter R Harris, and Kate Cavanagh. 2017. Improving Employee Well-Being and Effectiveness: Systematic Review and Meta-Analysis of Web-Based Psychological Interventions Delivered in the Workplace. *Journal of Medical Internet Research* 19, 7 (2017), 1 – 17. authtype=sso&custid=s1121596
- [6] Taya R. Cohen, A. T. Panter, Nazlı Turan, Lily Morse, and Yeonjeong Kim. 2014. Moral Character in the Workplace. *Journal of Personality and Social Psychology* 107, 5 (Nov. 2014), 943–963. doi:10.1037/a0037245
- [7] Edward L. Deci and Richard M. Ryan. 2008. Hedonia, eudaimonia, and well-being: an introduction. *Journal of Happiness Studies* 9, 1 (Jan. 2008), 1–11. doi:10.1007/ s10902-006-9018-1
- [8] Susan der Kinderen and Svetlana N. Khapova. 2020. Positive Psychological Well-Being at Work: The Role of Eudaimonia. In *The Palgrave Handbook of Workplace Well-Being*, Satinder Dhiman (Ed.). Springer International Publishing, Cham, 1–28. doi:10.1007/978-3-030-02470-3_79-1
- [9] Hitesh Dhiman, Yutaro Nemoto, Michael Fellmann, and Carsten Röcker. 2023. Beyond productivity and efficiency: design tools, methods and frameworks for psychological well-being, and (un)exploited potentials to assist employees at work. Frontiers in Computer Science 5 (Aug. 2023), 1129087. doi:10.3389/fcomp. 2023.1129087
- [10] Blaine J. Fowers. 2005. Virtue and psychology: Pursuing excellence in ordinary practices. American Psychological Association, Washington. doi:10.1037/11219-000
- [11] Blaine J. Fowers. 2016. Aristotle on Eudaimonia: On the Virtue of Returning to the Source. In *Handbook of Eudaimonic Well-Being*, Joar Vittersø (Ed.). Springer International Publishing, Cham, 67–83. doi:10.1007/978-3-319-42445-3_4 Series Title: International Handbooks of Quality-of-Life.
- [12] Blaine J. Fowers, Laura M. Cohen, Samantha Lang, Emily Winakur, G. Tyler Lefevor, and Meghan B. Owenz. 2014. What makes goals choiceworthy? A qualitative study of hedonic, eudaimonic, and structural motives. *The Journal of Positive Psychology* 9, 3 (May 2014), 235–253. doi:10.1080/17439760.2014.891152
- [13] Blaine J. Fowers, Bradford Cokelet, and Nathan D. Leonhardt. 2024. The Science of Virtue: A Framework for Research (1 ed.). Cambridge University Press. doi:10. 1017/9781108779968
- [14] Daniel Todd Gilbert. 2006. Stumbling on happiness (1st ed ed.). A.A. Knopf, New York.
- [15] Jonathan Haidt. 2024. The Anxious Generation: How the Great Rewiring of Child-hood Is Causing an Epidemic of Mental Illness. Allen Lane, an imprint of Penguin Books, UK USA Canada Ireland Australia India New Zealand South Africa.
- [16] Jim Harter. 2024. U.S. engagement hits 11-Year low. https://www.gallup.com/ workplace/643286/engagement-hits-11-year-low.aspx

 $^{^3\}mathrm{CEUR\text{-}WS}.\mathrm{org}$ requires the majority of authors to have a computer science background.

⁴The authors have previously published a Springer book [28]

- [17] Maren Hoffmann. 2024. Gallup engagement index Deutschland 2023: Mehr Als 7,3 Millionen Beschäftigte haben innerlich gekündigt. https://www.spiegel.de/karriere/gallup-engagement-index-deutschland-2023-mehr-als-7-3-millionen-beschaeftigte-haben-innerlich-gekuendigt-a-0692da04-2f26-4064-b40c-210747e9b027
- [18] Veronika Huta. 2013. Pursuing eudaimonia versus hedonia: Distinctions, similarities, and relationships. In *The best within us: Positive psychology perspectives on eudaimonia.*, Alan S. Waterman (Ed.). American Psychological Association, Washington, 139–158. doi:10.1037/14092-008
- [19] Veronika Huta and Richard M. Ryan. 2010. Pursuing Pleasure or Virtue: The Differential and Overlapping Well-Being Benefits of Hedonic and Eudaimonic Motives. Journal of Happiness Studies 11, 6 (Dec. 2010), 735–762. doi:10.1007/ s10902-009-9171-4
- [20] Veronika Huta and Alan S. Waterman. 2014. Eudaimonia and Its Distinction from Hedonia: Developing a Classification and Terminology for Understanding Conceptual and Operational Definitions. *Journal of Happiness Studies* 15, 6 (Dec. 2014), 1425–1456. doi:10.1007/s10902-013-9485-0
- [21] Anna Kawakami, Shreya Chowdhary, Shamsi T. Iqbal, Q. Vera Liao, Alexandra Olteanu, Jina Suh, and Koustuv Saha. 2023. Sensing Wellbeing in the Workplace, Why and For Whom? Envisioning Impacts with Organizational Stakeholders. Proceedings of the ACM on Human-Computer Interaction 7, CSCW2 (Sept. 2023), 1–33. doi:10.1145/3610207
- [22] Karoline Hofslett Kopperud and Joar Vitters⊘. 2008. Distinctions between Hedonic and Eudaimonic Well-Being: Results from a Day Reconstruction Study among Norwegian Jobholders. The Journal of Positive Psychology 3, 3 (July 2008), 174–181. doi:10.1080/17439760801999420
- [23] Neil Levy. 2017. Nudges in a post-truth world. Journal of Medical Ethics 43, 8 (Aug. 2017), 495–500. doi:10.1136/medethics-2017-104153
- [24] Alasdair MacIntyre. 1999. Dependent Rational Animals: Why Human Beings Need the Virtues. Open Court, New York.
- [25] Frank Martela and Kennon M. Sheldon. 2019. Clarifying the Concept of Well-Being: Psychological Need Satisfaction as the Common Core Connecting Eudaimonic and Subjective Well-Being. Review of General Psychology 23, 4 (Dec. 2019), 458–474. doi:10.1177/1089268019880886
- [26] Patrick D McGorry, Cristina Mei, Naeem Dalal, Mario Alvarez-Jimenez, Sarah-Jayne Blakemore, Vivienne Browne, Barbara Dooley, Ian B Hickie, Peter B Jones, David McDaid, Cathrine Mihalopoulos, Stephen J Wood, Fatima Azzahra El Azzouzi, Jessica Fazio, Ella Gow, Sadam Hanjabam, Alan Hayes, Amelia Morris, Elina Pang, Keerthana Paramasivam, Isabella Quagliato Nogueira, Jimmy Tan, Steven Adelsheim, Matthew R Broome, Mary Cannon, Andrew M Chanen, Eric Y H Chen, Andrea Danese, Maryann Davis, Tamsin Ford, Pattie P Gonsalves, Matthew P Hamilton, Jo Henderson, Ann John, Frances Kay-Lambkin, Long K-D Le, Christian Kieling, Niall Mac Dhonnagáin, Ashok Malla, Dorien H Nieman, Debra Rickwood, Jo Robinson, Jai L Shah, Swaran Singh, Ian Soosay, Karen Tee, Jean Twenge, Lucia Valmaggia, Therese Van Amelsvoort, Swapna Verma, Jon Wilson, Alison Yung, Srividya N Iyer, and Eóin Killackey. 2024. The Lancet Psychiatry Commission on youth mental health. The Lancet Psychiatry 11, 9 (Sept. 2024), 731–774. doi:10.1016/S2215-0366(24)00163-9
- [27] Tamyra Pierce. 2009. Social Anxiety and Technology: Face-to-face Communication versus Technological Communication among Teens. Computers in Human Behavior 25, 6 (Nov. 2009), 1367–1372. doi:10.1016/j.chb.2009.06.003
- [28] Carsten Röcker and Sebastian Büttner (Eds.). 2023. Human-Technology Interaction: Shaping the Future of Industrial User Interfaces. Springer International Publishing, Cham. doi:10.1007/978-3-030-99235-4
- [29] Richard M. Ryan and Edward L. Deci. 2001. On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. Annual Review of Psychology 52, 1 (Feb. 2001), 141–166. doi:10.1146/annurev.psych.52.1.141
- [30] Carol D. Ryff. 2014. Psychological Well-Being Revisited: Advances in the Science and Practice of Eudaimonia. Psychotherapy and Psychosomatics 83, 1 (2014), 10–28. doi:10.1159/000353263
- [31] L. Parker Schiffer and Tomi-Ann Roberts. 2018. The paradox of happiness: Why are we not doing what we know makes us happy? The Journal of Positive Psychology 13, 3 (May 2018), 252–259. doi:10.1080/17439760.2017.1279209
- [32] Kennon M. Sheldon, Mike Corcoran, and Mike Prentice. 2019. Pursuing Eudaimonic Functioning Versus Pursuing Hedonic Well-Being: The First Goal Succeeds in Its Aim, Whereas the Second Does Not. *Journal of Happiness Studies* 20, 3 (March 2019), 919–933. doi:10.1007/s10902-018-9980-4
- [33] Sabine Sonnentag, Louis Tay, and Hadar Nesher Shoshan. 2023. A review on health and well-being at work: More than stressors and strains. Personnel Psychology 76, 2 (June 2023), 473–510. doi:10.1111/peps.12572
- [34] Constantine Stephanidis, Gavriel Salvendy, Margherita Antona, Jessie Y. C. Chen, Jianming Dong, Vincent G. Duffy, Xiaowen Fang, Cali Fidopiastis, Gino Fragomeni, Limin Paul Fu, Yinni Guo, Don Harris, Andri Ioannou, Kyeongah (Kate) Jeong, Shin'ichi Konomi, Heidi Krömker, Masaaki Kurosu, James R. Lewis, Aaron Marcus, Gabriele Meiselwitz, Abbas Moallem, Hirohiko Mori,

- Fiona Fui-Hoon Nah, Stavroula Ntoa, Pei-Luen Patrick Rau, Dylan Schmorrow, Keng Siau, Norbert Streitz, Wentao Wang, Sakae Yamamoto, Panayiotis Zaphiris, and Jia Zhou. 2019. Seven HCI Grand Challenges. *International Journal of Human–Computer Interaction* 35, 14 (Aug. 2019), 1229–1269. doi:10.1080/10447318.2019.1619259
- [35] Daniel B Turban and Wan Yan. 2016. Relationship of eudaimonia and hedonia with work outcomes. Journal of Managerial Psychology 31, 6 (Aug. 2016), 1006– 1020. doi:10.1108/JMP-07-2015-0271
- [36] Nikhila S. Udupa, Jean M. Twenge, Cooper McAllister, and Thomas E. Joiner. 2023. Increases in Poor Mental Health, Mental Distress, and Depression Symptoms among U.S. Adults, 1993–2020. Journal of Mood and Anxiety Disorders 2 (Aug. 2023), 100013. doi:10.1016/j.xjmad.2023.100013
- [37] Shannon Vallor. 2016. Technology and the Virtues: A Philosophical Guide to a Future Worth Wanting. Oxford University Press. doi:10.1093/acprof:oso/9780190498511. 001.0001
- [38] Shannon Vallor. 2021. Twenty-First-Century Virtue: Living Well with Emerging Technologies*. In Science, Technology, and Virtues (1 ed.), Emanuele Ratti and Thomas A. Stapleford (Eds.). Oxford University PressNew York, 77–96. doi:10. 1093/oso/9780190081713.003.0005
- [39] Joep van Agteren, Jonathan Bartholomaeus, Emma Steains, Laura Lo, and Adam Gerace. 2021. Using a Technology-Based Meaning and Purpose Intervention to Improve Well-being: A Randomised Controlled Study. *Journal of Happiness Studies* 22, 8 (Dec. 2021), 3571–3591. doi:10.1007/s10902-021-00383-4
- [40] Carola Wärnå-Furu, Maria Sääksjärvi, and Nina Santavirta. 2010. Measuring Virtues – Development of a Scale to Measure Employee Virtues and Their Influence on Health. Scandinavian Journal of Caring Sciences 24, s1 (Dec. 2010), 38–45. doi:10.1111/j.1471-6712.2010.00799.x
- [41] Lauren E Willis. 2020. Deception by design. Harvard Journal of Law & Technology 34 (2020), 115.
- [42] Jennifer Cole Wright, Michael Warren, and Nancy E. Snow. 2020. Understanding virtue: theory and measurement. Oxford University Press, New York, NY, United States of America.