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# Building for Joy in the Digital World

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## ABSTRACT

User experience of digital platforms and technologies tends to be quite ‘thin’, characterized by low-quality engagements such as addictive tendencies or browsing on autopilot. In this paper, we take an interdisciplinary approach to identifying more cognitive and active dimensions of ‘thick’ user experience, introducing a new design and User Experience framework which is centred around the notion of joy. We consider existing frameworks which focus on dimensions such as delight, happiness, satisfaction, pleasure, adoption, and retention. We argue that many harmful kinds of engagement either do not impact negatively on these assessments, or even result in higher scores. We explain how we are working at developing measurements that operationalize different dimensions of joy, drawing from a series of case studies of different digital platforms and applications.

**Keywords:** Metrics, Digital Platforms, User Experience, Positive Affect, Joy, Survey, HaTS, HEART

## INTRODUCTION

As people spend more time using digital platforms, concerns have been raised about the quality of user experience that most end up having. One issue is that user experience can be predominantly negative, involving a “constant play of low-level emotions – such as anxiety, frustration, and anger” (Levy, 2016, p. 34). End-users spend time doomscrolling (Sahakian, 2022; Starkman, 2022), toiling through automated selection loops (Errick, 2022; Metschan et al., 2022), navigating nudging, excessive monitoring, and privacy breaches (and overly-demanding security features, as discussed in Krol et al., 2015), and trawling through shaming, explicit, or false content (Ribeiro et al., 2020; The Media Insight Project, 2022; Vogels, 2021a). Another concern is that even when user experience is positive, it is still detrimental to well-being. End-users have intense positive emotions as they take delight in malicious activities like trolling (March and Steele, 2020), or as they form addictive patterns of use (Beyens et al., 2016; Kuss and Lopez-Fernandez, 2016; Király et al., 2015; von der Heiden et al., 2019). Or, they may only get a low-level pleasure when browsing for hours on autopilot (Baughan et al., 2022; Baym et al., 2020). Despite high levels of engagement and positive affect, experience remains ‘thin’ – lacking in normative, active, and cognitive dimensions.

We argue that digital technologies should be *designed for joy* – supporting ‘thicker’ experience which involves deeper interactions, greater cognitive engagement, and more flourishing. Although there is no one definition of joy, the kind of experience we are interested in involves an intense feeling of fulfilment

and a deep alignment between some good in the world and oneself (Johnson, 2020a, 2020b). Recent work within positive psychology suggests that joy encompasses a range of motivations and intensities, and a cognitive profile which includes recognition of integrity and external factors, and normative assessments. Joy is a rich concept for use in evaluating the quality of user experience.

In this paper, we begin with existing frameworks, explaining the problem of ‘thin’ user experience. We bring in the latest empirical and conceptual research on joy, showing how it is a thicker notion of positive experience. Drawing on examples from our case studies, we then introduce our joy-focused framework.

## RELATED WORK

Many existing frameworks seek to inform design goals and provide metrics for user experience, beyond the dimensions of functionality and usability. These include a focus on promoting ‘delight’, such as Walter’s *Design for Emotion* and Norman’s *Emotional Design*, as well as *Funology*’s focus on fun and enjoyment (Blythe and Monk, 2018). We take Google’s HaTS (Happiness Tracking Survey, Müller and Sedley, 2014) and HEART frameworks (Rodden et al., 2010) as representatives, as these are widely used and apply to a range of popular products.

HaTS has nine items and asks about overall satisfaction, likelihood to recommend, frustrations with the product, appreciated features of the project, satisfaction with various product attributes, tasks it is used for, satisfaction with those tasks, time spent using the product, and usage frequency. HEART represents a general framework of five dimensions, leaving the creation of surveys and measurements to the researcher. **Happiness** measures general satisfaction with the product (HaTS provides a survey for this). **Engagement**, **Adoption**, and **Retention** make use of behavioural data to study how involved the user is with the product, such as the average length of user comments, how many users join per day, and how many users continue to utilise the platform per week. **Task Success** measures the effectiveness and efficiency of interaction with the platform and involves behavioural measures, such as how many users successfully use a feature.

## Thin vs. Thick User Experience

The problem with existing frameworks like HaTS and HEART is that they optimize for a thin understanding of pleasure, such that harmful engagements either do not impact negatively on their metrics, or even result in higher scores. Three major kinds of ‘thin’ user experience are of concern.<sup>1</sup>

*Addictive*: Positive experience could be part of a reinforcing and potentially addictive pattern of behavior (Beyens et al., 2016; Kuss and Lopez-Fernandez, 2016; Király et al., 2015; von der Heiden et al., 2019). For our purposes, we are referring to problematic habits such as compulsive or regularly excessive use (for further discussion, see e.g. Chen et al., 2022; LaRose et al., 2003). For example, a social media user may get a rush of happiness when someone ‘likes’ their post, but will quickly look for the next ‘hit’ – more ‘likes’, shares, and comments.

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<sup>1</sup> These are not intended to be exclusive – experiences could fit some or all of these kinds.

*Mindless:* User experience can be lacking in cognitive engagement with the digital technology. An example is scrolling through endlessly updating (and often banal) posts on social media (Baughan et al., 2022; Baym et al., 2020).

*Malicious:* User experience can involve taking pleasure in malicious or harmful kinds of content or engagements such as trolling, bullying, nudging, harassment, grooming, and phishing (March and Steele, 2020). Users may also propagate mis-/dis-/mal-information and explicit or harmful content (Maheshwari, 2017). Malicious behaviour is widespread across digital platforms, including those for discussion, gaming, dating, and personal messaging and emailing (Vogels, 2021b).

Of course, products which promote the above experiences could end up with low scores. For example, there may be low adoption and retention if users associate a web-based application with constant phishing attempts. However, many applications remain popular despite being rife with addictive, mindless, and malicious engagement. In fact, we can expect that retention and engagement will be high with addicted users. Similarly, mindless interactions may correlate with longer periods of engagement. Furthermore, technologies or platforms which allow users to carry out malicious actions may score highly on happiness and engagement for actors who enjoy those kinds of behaviours. Thus, products which support ‘thin’ kinds of user experience can end up doing well within typical frameworks.

We see our critique as adding to existing calls for better design frameworks, such as Alex Klein’s proclamation that “delight is dead” and his proposal of a ‘Periodic Table of Human Elements’ (Klein, 2022a, 2022b), Jon Yablonski’s seven principles in his Humane by Design resource (<https://humanebydesign.com/>), and the work of Trent Harris and the Centre for Humane Technology (<https://www.humanetech.com/>). Other similar frameworks have been offered by Calvo and Peters (2014; see also Peters et al., 2018), and Pohlmeier and Desmet (2017). To briefly expand on one of these, Pohlmeier and Desmet intend design to be about “creating opportunities for people to have pleasurable and meaningful experiences”. They identify three components enabling human flourishing: pleasure, personal significance, and virtue. However, they acknowledge that this entails design which prioritises indirect effects and intangible values.

Pohlmeier and Desmet recognise a problem: the abstract nature of notions such as ‘flourishing’, ‘humanization’, and ‘wellbeing’ means that they are difficult to apply. What does experience of flourishing feel like? We suggest that thicker notions of experience help to differentiate between types of positive affect and motivation and open up space for normative and cognitive dimensions, rather than relying on descriptive measures of user behaviour and self-reported satisfaction.

### **Joy and Recent Developments in Positive Psychology**

The demand for a more nuanced approach to positive affect parallels a recent move in positive psychology, where there has been a shift in focus from happiness and ‘thin’ conceptions of pleasure to ‘thicker’ notions, such as joy (see e.g. Emmons, 2020; Johnson, 2020b, 2020a; Watkins et al., 2018). Joy encompasses a variety of experiences, from the excitement of a party to the serenity of meditation, but there are some shared features which can be brought out.

Much of the literature in psychology on joy is grounded in the ‘broaden and build tradition’, which suggests that joy functions to expand thoughts and actions, facilitating the learning of novel modes of thought and behaviour (Fredrickson, 2009, 2004). According to this theory, certain negative emotions benefit us in a more immediate way. For example, disgust keeps us away from potentially harmful stimuli. By contrast, certain kinds of joy provide benefits in the longer term. Feelings of joy facilitate activities of playful experimentation, imagination, and creation. Through this, we learn cognitive, behavioural, and relational skills, forming new relationships and enhancing resilience to future obstacles or threats.

The ‘broaden and build’ tradition suggests that joy is supported by a variety of motivations, such as feelings of safety, freedom, ease, and creativity. Additionally, joy provides motivation for further engagement. Joy also varies widely in intensity, from intense excitement to calmness (Johnson, 2020a; Meadows, 2014).

Another important feature of joy is its cognitive profile, connecting to related constructs such as identity and social bonding. Joy involves a “concern-based construal” (Roberts, 2013) in which one recognizes that one is experiencing integration within or between oneself, others, and the world, for reasons that are at least partially outside of one’s direct control (Johnson, 2020a; Johnson and Robertson, in prep; Volf, 2015). The recognition that some of those factors come from outside of the self is typically affectively tagged with the experience of gratitude that things have gone well. Studies have found that joy and gratitude mutually potentiate one another (Watkins et al., 2018). As part of its cognitive profile, joy also involves normative assessments, as with the distinction between joy in helping others and joy in harm done to others (schadenfreude or sadism; see Arnett, 2022; Johnson, 2020a).

The concept of joy may have other advantages. For example, some suggest that joy resists hedonic adaptation (Chesterton, 1927, pp. 106–7), and is compatible with sorrow and oppression (Casioppo, 2020; Lu and Steele, 2019; Packnett, 2017; Thompson, 2015; Underwood, 2020). Joy, unlike other positive emotions such as happiness, can be maintained in support of overall flourishing even in the midst of adverse circumstances.

## DESIGNING FOR JOY

Joy encompasses a range of motivations and intensities, and a cognitive profile which includes recognition of integrity, dependence on external factors, and normative assessments. From this, we propose a design and UX framework with five dimensions: **Motivation**, **Intensity**, **Integrity**, **Normative**, and **Dependent**. As part of our research, we carried out or supervised several case studies. Below, we draw on these studies to provide examples of 1) survey questions which target the different dimensions of joy, and 2) how UX research can further explore and apply the different dimensions of joy.

### Motivation

This dimension evaluates the conditions involved in ‘broadening and building’: feelings of safety, freedom, ease, and creativity that facilitate experimentation and

learning. It considers whether the platform provides sufficient context for these motivations, and whether there are mainly thin motivations for engagement, such as desire for pleasure, or thicker motivations, such as desire for social connection, self-actualization, or even seeking joy itself.

For a study of social media platforms, we took a survey-based approach with a question asking, “To what extent do the following factors motivate your use of [product]?”. A fully labelled 5-point scale made up the columns of a grid, ranging from ‘none at all’ to ‘a great deal’. Rows consisted of a range of motivations: freedom and ability to experiment, safety, social connection, competition, pursuing or achieving goals and rewards, greater or lesser consciousness of one’s whole person, gratitude, and beauty or aesthetic factors. We also provided an answer text box, asking: “Are there any other factors motivating your use of [product]? Please explain”. We were interested in whether the platform was supporting or changing end-users’ motivations, so we provided another open-ended question: “Have your motivations for using [product] changed over time? Please explain”.

A relevant case study we engaged with investigated how to prevent hedonic adaptation when using mobile fitness apps, which are prone to drop-off in engagement over time (Lu, 2022). This study introduced design elements which facilitated motivations for joy, such as offering reminders of personal progress and unexpected achievements (greater self-awareness and gratitude), and capacities for flexible goal-setting (freedom).

## **Integrity**

This evaluates end-users’ experience of three kinds of integrity (Johnson and Robertson, in prep; Robertson and Johnson, 2023). The first kind of integrity is integration with the world. This has to do with truth or quality of content, which is relevant to issues such as the prevalence of mis-/dis-/mal-information. The second kind is self-efficacy, in which one is able to change some feature of the world according to one’s desires. The third kind is self-unity/self-consciousness, in which one achieves a higher degree of psychic unity (a consistency between one’s beliefs, desires, hopes, projects, and commitments). Integrity is an important part of thicker user experience because joy is a response to the experience of one of the three types of integrity (Arnett, 2022; Johnson, 2020b, 2020a; Van Cappellen, 2020). The three kinds can be mapped to related psychological constructs, so various standard psychometric tests can also be selected for inclusion within this dimension.

For our case study of social media platforms, we used a question asking, “Indicate how satisfied or dissatisfied you are with [product] in the following areas”. Participants select their answers from a grid. The rows consisted of factors relevant to integrity: connection to the world, supporting feelings of empowerment, gaining a better understanding of oneself, accessing the desired kind of information, and the quality of the community and community norms. The columns were a fully labelled 5-point scale, ranging from ‘extremely dissatisfied’ to ‘extremely satisfied’, with ‘neither satisfied nor dissatisfied’ in the middle.

One case study we followed was about improving emotional recognition for autistic individuals in digital spaces (Roche, 2022). This study considered how joy

is experienced by autistic individuals when digital technology is used to overcome barriers to emotional recognition. Beneficial features included those which allowed accurate and nuanced recording and sharing of emotions. This reflects the supervenience of joy on recognition of self-to-world integrity (as users reach a greater understanding of others' emotions), self-efficacy (as users are able to share their own emotions in the way they want, and to the extent they want), and self-consciousness (as users achieve a greater understanding of their own emotions).

### **Intensity**

This measures the strength of the experience (e.g. excited vs. serene joy; Johnson, 2020a; Meadows, 2014), allowing granular insights into different kinds of positive experiences. For our case study of social media platforms, we used an open-ended question: "Reflect on the experiences you have had while using [product]. Which (if any) of the following describe those experiences (please explain)". We provided bullet points with experiences to reflect on: 'intense and high-energy', 'calm, at equilibrium', 'making a breakthrough', 'struggle', and 'outrage'.

We also followed a case study which investigated how immersive virtual experiences create empathy for refugees (Koker, 2022). There were varying intensities of joy in the virtual portrayal of a refugee family's journey, such as the joy of meeting friends along the way and finding safety in a new life. The study reflected how calm and serene joy can emerge and persist alongside (and without diminishing) intense sadness and distress.

### **Normative**

This dimension enables the MIIND framework to go beyond simply descriptive evaluations of experiences, to assess the normative dimensions of the platform (including moral and aesthetic), and end-users' normative evaluations of these dimensions. Our case study of social media platforms used an open-ended question: "Reflect on the experiences you have had while using [product]. Which (if any) of the following describe those experiences (please explain)". We listed options as bullet points: gratitude, unfairness, competitiveness, schadenfreude or sadism, powerful and positive social connection, powerful and negative social connection, and beauty or ugliness.

In the case study of virtual representations of refugee experience, one research question was how to avoid perpetuating negative stereotypes, supporting long-term positive narratives and care instead (Koker, 2022). A suggestion is that sharing joy moves participants away from voyeurism and negative experiences like sadism or schadenfreude, and towards experiences with more positive normative dimensions like beauty, gratitude, and positive social connection.

### **Dependent**

This evaluates perceptual focus, exploring how end-users attend to factors outside of their control that affect their experience – features that contribute to feelings such as gratitude or unfairness. This reflects how joy involves awareness of external factors as part of the sense that integration is occurring for reasons outside

of one's control (Johnson, 2020a; Volf, 2015). This sense of awareness marks active, normatively-informed, and cognitively engaged experiences. Examples from our case studies include the joy of an unexpected achievement highlighted by a fitness app (Lu, 2022), or the joy experienced by autistic individuals when technology is used to remove barriers to emotional recognition (Roche, 2022). There is overlap between this dimension and the **Normative** dimension, as answers indicate end-user awareness of external factors. We did not include separate questions for this dimension in our survey on social media.

### **Asking Directly about Joy**

The end of a survey or interview is a good opportunity to ask some questions directly on joy. This helps to avoid biases in which earlier questions about joy impact on responses to later questions (Landon, 1971; Müller and Sedley, 2014). Direct questions can be about more specific joy-related issues, such as whether those who are deliberately searching for joy are more likely to find it. For our study of social media, we offered a definition of joy: "Joy is a powerful positive experience or vision of some aspect of the world, or yourself, being the way you want it to be." We then asked a yes/no question, "Have you ever found joy, as described in this way, while using [product]?" If the participant answered yes, we provided an open-ended question, "Please describe the joy you found while using [product]. Did any of the features of the platform help make this possible?" If the participant answered no, then we provided an open-ended question: "What would need to change about [product] to make joy possible for you?". In both cases, we ended with a yes/no question, "Were you looking for joy while using [product]?"

### **CONCLUSION**

We began with concerns that digital technologies and platforms are "draining" joy, despite frameworks such as HEART and HaTS promoting high levels of engagement and even positive affect. We highlighted addictive, mindless, and malicious ways of engaging, and differentiated these from thicker forms of experience which promote flourishing. Joy, with its rich motivational and cognitive profiles, was proposed as the focus of a supplementary design and UX framework.

MIIND supplements HEART and HaTS by allowing for more granularity, as it can more clearly differentiate the types of affect and motivation involved. This is especially useful for the cases in which we want to see whether there are primarily addictive or malicious motivations for high levels of engagement. It also offers insights into the intensities and kinds of happiness and satisfaction in play, which goes towards screening out mindless engagement. Our framework is descriptive, but also provides space for normative assessment, including aesthetic and moral factors (e.g. harming joy and *schadenfreude*). Lastly, our framework moves beyond behaviour and affect, evaluating the cognitive aspects of user experiences.

Future work could validate this framework by exploring whether designing with the MIIND-HEART approach increases adoption, retention, and task success. We could also explore whether MIIND-HEART designed products are more (or less) financially profitable. Users will benefit from the MIIND-HEART

framework, as they will have access to thicker forms of experience and flourishing. In turn, thicker engagement from users means better quality of information for technologists, who can collect data on more nuanced dimensions such as motivational and cognitive elements. Furthermore, committing to supporting joy and integrity (and having the data to substantiate this commitment) could help to tackle the erosion of trust in the tech sector (Edelman Trust Barometer, 2022).

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