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# How can we Support Meaningful Social Relationships through Digital Design?

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**Abstract**

The possession of stable and supportive relationships has a crucial influence on a person's emotional wellbeing. In order to inform the design of interactive technologies to meaningfully support the formation and maintenance of interpersonal attachments, this paper suggests a discussion on the qualities of social interactions and communications that allow for meaningfulness and wellbeing in peoples' lives. Invited reflections on the potentials and limitations of digital designs targeted at nurturing social bonds relate to aspects of self-investment, privacy, intimacy and meaningfulness, which are rarely the focus of many existing social communication technologies.

**Keywords**

Emotional wellbeing, interaction design, social relationships, belongingness, social communication

**Introduction**

Research in HCI on emotional wellbeing is still in its early stages. A large amount of the existing work focuses on the development of assistive technologies and mental health supporting interventions to monitor peoples' wellbeing or promote their process of recovery from mental or physical illness. Recently, there have also been first attempts to unpick the wellbeing

qualities of social network sites [2] or sociable robots [6][7]. Taking a brief look at the nature of current communication technologies, including social networks, robots and technologies to support intimate social exchanges, we argue that many of these communications are restricted in terms of a person's personal investment in, and attention to, the conversation partner(s) and vice versa. This paper therefore aims at inviting discussion on the potentials and limitations of digital designs to meaningfully support peoples' interpersonal relationships, which is of crucial importance to their emotional wellbeing [1].

### **Why Social Relationships?**

Humans are inherently social beings. They have not only the affiliate drive to form and maintain social bonds with others, but a fundamental need for lasting, positive and significant interpersonal relationships. This so called *need for belongingness* [1] can only be fulfilled if the person has frequent and pleasant interactions with at least one other person, which are marked by stability and a mutual sense of caring and concern. Moreover, such interpersonal bonds are a powerful determinant of a person's health and wellbeing [4]. They can provide assistance and social support to overcome the stresses of everyday life. In contrast, an absence of belongingness is strongly associated with negative affect, such as depression, loneliness, social anxiety as well as other health issues (e.g., increased incidence of cancer, tuberculosis, heart attacks) [1].

### **Technologies for Social Communication**

We are nowadays surrounded by a variety of technologies that make it fairly easy to interact and communicate with others. Common examples include

emails, instant or text messages, video chats, blog entries, Twitter tweets or Facebook status updates. These technologies are naturally incorporated in peoples' daily social exchanges and routines. They allow us to be continuously connected and, if we wish, to many people at once. As a result, we tend to rapidly respond to multiple requests, meaning that our digital communications become less complex and less intimate [6]. This is probably not surprising when looking at the design of Twitter, where messages are limited to 140 characters and can be read, re-tweeted or responded to by anybody who signs up for this service. But how can these rather superficial and almost anonymous forms of social communication be beneficial or even detrimental for a person's emotional wellbeing, and take us perhaps more away from others and create social isolation [6]?

#### *Connecting to Friends in Social Networks*

Recently, there has been an increase in research on the relationship between peoples' activities on social online networks and their social wellbeing. Burke et al. [2], in their research on individuals' Facebook use, found that having a large circle of so called 'friends' is associated with greater access to a variety of new information through these friends. Directed communications to others (e.g., leaving comments, wall posts), however, were more strongly related to emotional support from friends and lower loneliness. Moreover, the passive consumption of friends' content was associated with higher loneliness. What if interaction designs like Facebook or Twitter primarily distract us from more valuable personal and directed interactions with others?

#### *Robots as Social Companions?*

There have also been advancements in exploring the impact of robotic friends or pets on peoples' emotional



**Figure 1:** Closed box artifact.



**Figure 2:** Opened box artifact with a screen to the left and a RFID tag containing object to the right to trigger the display of a video message.

wellbeing. As social companions, they can engage children in play (e.g., robot dog AIBO from Sony) or provide a pleasant distraction to elderly people in care homes (e.g. the seal robot Paro [7]). Robots, although limited in their social abilities, are often experienced by users as being 'alive enough' to be loved and cared for [6] (p.28). Interactions with Paro were found to calm agitated, anxious and depressed seniors, improved their mood and increase communications between them and their caregivers [7]. Yet, are new engagements with robots just a compensation for a lack of human attention, time and care? To what extent are robots able to fill the gap of unfulfilled social interactions and help overcome social isolation and loneliness? On one hand, engagements with robots can be considered less demanding and stressful when compared to human interactions. On the other hand, one may wonder if feelings of closeness are truly possible with a machine. Interactions are usually highly simplified by the systems, which often only have a small set of displayable emotions [6]. A robot cannot really understand, feel for, or care about a person. Can this ever be a truly satisfying relationship or is it rather a limited substitute?

#### *Intimate Social Interactions*

Intimacy is one of the most important qualities, and central rewards, of close interpersonal relationships and this is of particular importance to our wellbeing. It enables the experience of warmth, commonality, closeness and caring. A significant body of research in HCI has sought to support, augment and extend intimate experiences (examples include the *kiss communicator* or *PIO- and DIO devices*). Many of these interaction designs address the sensual character of intimacy (touch, hugging, warmth, etc.). They mediate

simple intimate acts or aim to make the presence of a beloved person apparent. Yet, the set of possible communication acts is often small (e.g. switching on light, pressing a button on a screen). Thus, invited social communications are clearly prescribed through the design and leave little space for more meaningful interpersonal engagements.

#### **A Design for more Meaningful Engagements**

We would like to present the Lovers' box [5] as an example for a design that allows individuals to more meaningfully engage with each other. This interactive artifact is designed to frame a very personal context for intimate communication within romantic relationships. The Lovers' box (Figure 1 and 2) is crafted from wood and designed to resemble a jewelry box. Incorporated technology allows partners to display and exchange video messages reciprocally with one another. In a small scale evaluation, one box has been given to each of five couples for a period of five weeks.

#### *Self-Investment and Reciprocity*

The making of the video message required considerable effort relating not only to the *time* one invests in editing content, but the *thoughts* one spends on the content. Each message is addressed to one particular person, the partner, and represents an expression of attachment to that person. Moreover, in disclosing personal thoughts and feelings through the messages, the person invites empathic and supportive responses, which can foster relationship commitment, interpersonal liking and trust. Self-disclosure in this regard, if positive and reciprocal, constitutes a crucial facilitator in the development of interpersonal intimacy [5]. Qualities such as individuals' invested time, thoughts or emotions relate to what has been proposed

in the philosophy of *slow* technology [3]. As such, the effortful making as well as the display of video messages through the box was perceived as a valuable shared activity between partners and a positive extension of their relationship.

#### *Private and Personal*

The box was further described as a keepsake and digital storybook. Embedded messages highlighted meaningful aspects of the couples' relationship and were of highly personal content. They felt like a unique gift, as something that cannot easily be reproduced in the same manner by anybody else. Moreover, the unfolding of one's inner life and the sharing of personal or private information can increase mutual knowledge and understanding, which allows for a better fulfillment of one another's' social and emotional needs [8]. As a physical artifact, the box could also be locked with a key, allowing couples to keep their content private.

#### **Conclusion**

The Lovers' box is a tentative exploration into design to support genuine intimacy and reciprocity in a form that feels less like a common assumption of a digital device and more like a slower paced form of investment and communication, similar perhaps to the qualities of a written letter. The design space for more meaningful interpersonal engagements to support peoples' emotional wellbeing is currently underexplored and as consequence, significant aspects of human communication impoverish. Technology however has the potential to support rich interpersonal qualities. It can provide a suitable frame for interpersonal interaction and can trigger engagement (cf., also the interactive piece *Tales of I* [8]). We therefore believe that a discussion on the values, qualities or types of

social communications that are beneficial to a person's wellbeing will not only contribute to our understanding of what constitutes emotional wellbeing, but can valuably inform future designs.

#### **Acknowledgements**

This work was supported by Microsoft Research through its PhD Scholarship Programme.

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