Reducing Social Pressure in Food Choice with Digital Tools

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Abstract

Social support is essential in an invidivual's attempt to sustain a healthy diet, whereas the act of social pressure can sabotage abiding to such a diet. Surprisingly, there is a shortage of research studies in HCI investigating digital tools that amplify social support and reduce social pressure before or during the process of food choice. To close this gap, we began our research by exploring how social pressure can be eased in a working environment, within the case of co-workers deciding where to go to lunch. We further expect to design and implement social-based nudges, with the challenge of avoiding tensions in existing social relations.

Author Keywords

ACM Classification Keywords

H.5.m [Information interfaces and presentation (e.g., HCI)]: Miscellaneous

Motivation

"It is not where you go - it is who you go with". (Unknown)

This saying could easily be applied to eating, as most eating occurs in the presence of others. Breakfast with family, lunch with co-workers or dinner with friends - eating is a

social event. However, in group settings, people tend to consume more food [7, 3]. A group which consists of family and friends, provides certain peer pressure so individuals feel encouraged to rather eat food higher in fat and food they never tried before [6]. In a dining situation where group members each decide for themselves, members seek to choose a meal different to the meal of others, but not *too* different [2]. Moreover, the effect of peer influence outweighs the effects of objective nutritional information [2]. Thus, it is important to realize these effects and support individuals in their effort to sustain a healthy diet.

Although social influence is often inevitable in the process of food choice, the HCI community surprisingly underexplores digital tools that amplify social support and reduce social pressure *beforehand*. As one of the first works in HCI, Svensson et al. [8] demonstrated on a case of a recipe recommender system, how other user's actions affect the recipe choice of an individual. A recent study on sharing food pictures on Instagram [1] has shown, that people post pictures of their meals in social media with the aim of receiving and providing social support. Nevertheless, in such cases a food choice has already been made. However, there is still a lack of systems that support food decision making beforehand in a greater social scope than the individual or peer one [4, 5].

Research Position
Within our research, we aim to design tools that reduce social pressure and amplify social support *before* or *during* the process of choosing food.

We began by investigating how social pressure in food choices can be eased in groups, on the use case of co-workers deciding where to go for lunch. For that purpose, we implemented a bot-based voting system, Lunchocracy, that anonymously collects lunch preferences of the voters. Results demonstrated that social pressure was indeed perceived as reduced by using Lunchocracy [9].

Subsequently, our research will consist of:

- exploring and designing nudges, based on the social environment, that encourage and inspire individuals to abide to a healthy diet

- investigating the similarities and differences of deploying tools similar to Lunchocracy in other groups than the work environment, with different dynamics (e.g. friends going out for dinner, dishes for family gatherings, smaller groups of 2 to 3 people etc.).

An important challenge to address is to balance between strong social relationships and one's desire to abide to a healthy diet, i.e. the digital tools not arousing negative emotions both within the individual and his/her social environment.

REFERENCES
1. Chia-Fang Chung, Elena Agapie, Jessica Schroeder, Sonali Mishra, James Fogarty, and Sean A Munson. 2017. When Personal Tracking Becomes Social: Examining the Use of Instagram for Healthy Eating. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. ACM, 1674–1687.

2. Brenna Ellison. 2014. "I'll have what he's having": Group ordering behavior in food choice decisions. *Food Quality and Preference* 37 , 79 – 86.

3. C Peter Herman. 2015. The social facilitation of eating. A review. *Appetite* 86 , 61–73.

4. Tad Hirsch, Catherine Lim, and Jennifer J. Otten. 2016. What's for Lunch?: A Socio-ecological Approach to Childcare Nutrition. In *Proc. DIS 2016*. ACM, New York, NY, USA, 1160–1171.

5. Julie Maitland and Matthew Chalmers. 2011. Designing for Peer Involvement in Weight Management. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11)*. ACM, New York, NY, USA, 315–324. DOI: http://dx.doi.org/10.1145/1978942.1978988

6. Wm Alex McIntosh. 1996. Food and nutrition as social problems. In *Sociologies of Food and Nutrition*. Springer, 215–234.

7. Marion Nestle, Rena Wing, Leann Birch, Lorelei DiSogra, Adam Drewnowski, Suzette Middleton, Madeleine Sigman-Grant, Jeffery Sobal, Mary Winston, and Christina Economos. 1998. Behavioral and social influences on food choice. *Nutrition reviews* 56, 5 , 50–64.

8. Martin Svensson, Kristina Höök, Jarmo Laaksolahti, and Annika Waern. 2001. Social Navigation of Food Recipes. In *Proc. CHI'01*. ACM, New York, NY, USA, 8.

9. Nađa Terzimehić, Mohamed Khamis, Florian Bemmann, and Heinrich Hussmann. 2018. Lunchocracy: Improving Eating Dynamics in the Workplace Using a Bot-Based Anonymous Voting System. In *To appear in CHI'18 EA*. ACM.