

# Bourdieu Reloaded: On the Social Construction of Digital Taste

JENNY BERKHOLZ, University of Siegen, Germany

GUNNAR STEVENS, University of Siegen, Germany

Despite the growing research of taste interfaces, the focus of the HCI community seems to be on the manipulation and stimulation of taste. Our literature search in the ACM Library on a total of 262 titles using the keywords *food* and *taste* shows that taste is not considered as a socio-cultural approach, but more as a sensory phenomenon. In this work-in-progress paper, we address and discuss this gap in taste research within the sphere of *Smell, and Temperature Interfaces*.

CCS Concepts: • **Human-centered computing** → **HCI theory, concepts and models**;

Additional Key Words and Phrases: literature survey, taste, gustatory interfaces

## ACM Reference Format:

Jenny Berkholtz and Gunnar Stevens. 2021. Bourdieu Reloaded: On the Social Construction of Digital Taste. In *Woodstock '18: ACM Symposium on Neural Gaze Detection, June 03–05, 2018, Woodstock, NY*. ACM, New York, NY, USA, 5 pages. <https://doi.org/xxxx>

## 1 INTRODUCTION

While taste is almost a hegemonic paradigm in sociology [8], it is not as common to explore it as something that depends on socio-cultural aspects in the context of digital gustatory interfaces. Nevertheless, dealing with design with and for taste is a growing discourse in HCI. [12] To contribute to weaving cultural aspects of food and taste into HCI scholarship, we searched for the keywords *taste* and *food* in the current ACM library (SIGCHI) as the leading HCI literature database at literature review. We discovered that food-centered adaptation, which includes taste, was more dominant than the 57 taste-centered texts, with 205 articles. It seemed that food is something that needs to be optimized to support health or environmental issues. We also found that taste is something that is of interest to be modified or stimulated, either electronically or thermally. Taste is also very complex. Its various levels are neither merely sociological nor scientific. The taste of wine, as an example to explore these different levels, can be a matter of distinction, but it can also leave a real taste in the mouth [3]. We want to point out a gap in the discourse of taste interfaces that do not consider the social construction of digital taste. Our main contributions here are, first, to include taste as a sociological concept more in the research area of *Taste, Smell, and Temperature Interfaces*, and second, to give more space to understanding the social appropriation of taste, in addition to the exploration and simulation of taste, by conducting group-based studies for gustatory interfaces.

## 2 METHOD

To conduct a structured literature survey, we methodically followed Webster and Watson's concept-centric approach and are still in the process of analyzing. [18]. Further, we oriented towards existing Literature Reviews like Li et al. [10] for analyzing our results. We are still in the process of this.

---

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from [permissions@acm.org](mailto:permissions@acm.org).

© 2021 Association for Computing Machinery.

Manuscript submitted to ACM

53 Further, we chose the keywords *taste* and *food* and found 539 results in ACM Library for the Special Interest Group  
54 Human-Computer-Interaction (SIGCHI). We chose the option to search anywhere for the keywords and not only in  
55 title or abstract to gain a broad sample. Our survey period ended on September 17, 2020. This resulted in 539 papers in  
56 total since January 1, 2010.

57  
58 Similar to Li et al. [10] we further built exclusion criteria. While reading the titles and abstracts we excluded topics  
59 that did not promote the survey as they mainly addressed issues like Animal-Computer-Interaction or Tourism and  
60 Fashion. We also excluded papers where the taste for food was only one category among others and not in the center of  
61 the paper. Besides, we eliminated duplicates. This resulted in 277 non-relevant titles and 262 relevant titles.

62  
63 Before starting our survey, we found the tool *HFI Lit Review App* (<http://ferranaltarriba.com/hfi/>) by Altarriba Bertran  
64 et al. [1] to be very fruitful in gaining initial insights into the Human-Food-Interaction (HFI) community and their taste  
65 perceptions. In this tool, we found 38 titles that made taste a subject of discussion. We synchronized these papers with  
66 our survey and found 15 papers that were already included in our sample, the remaining 23 papers were not added to  
67 our survey as they coincided with our excluding criteria. Therefore, we still had the same number of results for our  
68 study.

69  
70 We then formed categories out of the relevant papers and found 205 food-centric papers and 56 taste-centric papers.  
71 Further, we sorted them into different subcategories. The Food-centric papers were selected into Health, Virtual-Reality,  
72 and Food Waste. We repeated this with the 56 papers that are dealing with taste as an explicit topic. We found two  
73 subcategories, which we describe in the following paragraph. Texts that included smell as well as taste fit into the  
74 taste category because they are interwoven [15]. As commonly known, the ability to smell is interconnected with our  
75 perception of taste in the sense of not being able to properly taste food when one has a cold and therefore a clogged  
76 nose. We understand smell also as a skill that could be trained, collectively experienced, and discussed. Suzuki et al.  
77 [16] even defined taste and smell as equally connected to human emotion and memory.

### 81 3 PRELIMINARY RESULTS

82  
83 Similar to Brueggemann et al., who distinguish two main branches within digital taste research, we also distinguished  
84 between the two categories of electronic artifacts that experiment with taste and the ones that are focused on the  
85 sense-making of taste. [5] Uninfluenced by Brueggemann et al. [5] we built the subcategories of *Taste Simulation and*  
86 *Stimulation* and *Taste Exploration*. Other like Brueggemann et al. we found 36 papers that fit into the first category,  
87 whether through thermal, electrical, or visual changes. However, we found 22 papers that gained insights into taste  
88 perception itself, and fit our second category. Within the latter category, we found no papers that incorporate taste  
89 as a socially constructed entity. Even though Ranasinghe et al. [14] in line with findings from Brueggemann et al.  
90 and Obrist et al. [5, 13] defined taste as something affected by social circumstances. Currently, we are analyzing the  
91 different definitions that researchers have for taste and the different approaches they use to analyze it. So far, we see a  
92 tendency to research taste as affected by electricity and thermal methods, while its perception is dependent on emotions  
93 and memories, visuals like color, physiology, and sound. Still, taste seems to be a multi-sensory entity for most of the  
94 research papers in our sample.

95  
96 The approach of *lickable cities* stands out as an alternative conception of taste. Wherein Brueggemann et al. understand  
97 taste as a boundary between the individual and the political, which "forces us to do messy science" [5] and to take taste  
98 seriously. Yet, it is what we want to support: exploring taste in its many facets. They go on to explain, that "thinking  
99 with, designing for, and interacting through taste" [5] is especially challenging for HCI researchers. Following Harley et  
100 al., taste interfaces tend to exclude organic materials or foods [7]. We would like to include the dependence of taste on  
101  
102  
103  
104

105 food, because of its link to social meanings. Our survey underlines this, as it was a clear barrier between the food-centric  
106 and the taste-centric papers. Gayler et al. go even further when they state that "although food is a key material for these  
107 experiences" [6], gustatory interfaces do not use it as a way to understand the emotional aspects of it. Additionally,  
108 Ranasinghe et al. [15] defined flavor as something infinite and cognitive, whereas taste would only be associated with  
109 the human tongue. We want to extend this view of taste to social taste. Few articles, such as by Obrist et al. have  
110 discussed how taste is multi-sensory or dependent on social circumstances [5, 9, 11, 13].  
111

112 We would argue that this is particularly fruitful in learning more about taste discourse and its digital emergence.  
113 Analyzing this would bring together a user-centered perspective, resulting in satisfied users who actively shape the  
114 tasting process, as described in the following.  
115

#### 116 4 SOCIAL CONSTRUCTION OF TASTE

117 To close the detected gap, we want to understand taste detached from its sensual meaning. We draw on the following  
118 definition by Bourdieu: "In order for there to be tastes, there have to be goods that are classified as being in 'good' or  
119 'bad' taste [ . . . ] Classified and thereby classifying, hierarchized, and hierarchizing" [4]. Thus, we must consider both  
120 the relation of the object that is tasted and the subject that tastes. Following Hennion [8], we also relate physicality to  
121 taste, because Bourdieu did not leave out the sensual part of tasting with the tongue either. However, we would like to  
122 add socio-cultural aspects to this and base this social component, which is important for us, on Howard Becker [2].  
123 Becker saw taste as determined both by its materiality and by social processes of learning and appropriation. With  
124 *Becoming a Marijuana User* [2] he stated already in the 1950s that taste is not something *natural* but is learned. With  
125 this assumption, he opposed the behaviorist premises common at the time that certain characteristics were innate  
126 to humans [2]. Becker recognized that predisposition theory cannot explain why, for example, the use of marijuana  
127 does not affect some people and very much an effect on others. The answer lies in reducing activities and preferences  
128 to collectives rather than just individuals. Thus, we consider group-based studies to be more fruitful for studying  
129 consumption practices. These considerations can be applied to most stimulants that initially taste unpleasant when first  
130 consumed or whose effects can be interpreted as unpleasant, such as alcohol, cigarettes, or coffee. Thus, an enjoyment  
131 for a particular taste develops collectively, during the observation and imitation of already experienced consumers.  
132 Following Hennion [8], we understand taste formation as a process in which subject and object shape each other and  
133 should not be considered separately. Another perspective that brings a new focus to taste would be to see taste as an  
134 activity, [17] something that is actively done, even in an unconscious way. Taste is not something passive that happens  
135 to us but is flexible and learnable. In practice theory a more holistic perspective on taste has been discussed, in which  
136 neither a socio-deterministic nor a material-centered approach is preferred, but rather an interconnectedness. Thus, the  
137 taste of food or popular goods such as fashion or music is also included praxeologically. In this way, the preference for  
138 digital artifacts is also shaped by taste. We want to take an approach that transfers this taste perspective to the HCI  
139 community.  
140  
141  
142  
143  
144  
145  
146  
147

#### 148 5 CONCLUSION AND FUTURE WORK

149 Taste is a topic in several disciplines, such as HCI, sociology, and biology. We have identified two main distinctions in the  
150 field of taste research for HCI. The first would be the simulation, stimulation, and manipulation of taste through various  
151 aspects such as electricity and thermal methods, and the second is the research field of exploration and theoretical  
152 framing of taste, which is less explored, as indicated by our survey. We have identified a gap in the inclusion of a  
153 socio-cultural perspective in taste research. We would like to support an embedding of a collectively created taste  
154  
155  
156

157 experience to transform design and understanding. In addition to discussing taste as a naturalistic and sensual instance,  
 158 we want to broaden the view towards a more interdisciplinary and complete approach by also taking sociological  
 159 concepts into account. Future research should also examine taste as interwoven within, for example, gender discourse.  
 160 We could also consider taste for the design of a satisfying user experience and digital artifacts. Furthermore, we can use  
 161 this taste approach to support sustainable behavior and also healthier lifestyles, as taste is something changeable and  
 162 negotiable. It would be interesting to use gustatory interfaces to explore how such change and negotiation work. The  
 163 methodology could also benefit from more group-based research to see how talking about taste affects taste perception.  
 164 As our paper is still work-in-progress, we are far from an informed statement, but we want to use the workshop as an  
 165 opportunity to get into a discussion about Bourdieu's approach to taste and how it might be incorporated into HCI  
 166 discourse. We want to encourage the community to bring this into the realm of simulation as well as the theoretical  
 167 realm.  
 168  
 169  
 170  
 171

## 172 REFERENCES

- 173 [1] Ferran Altarriba Bertran, Danielle Wilde, Erno Berezvay, and Katherine Isbister. 2019. Playful Human-Food Interaction Research: State of the Art  
 174 and Future Directions. In *Proceedings of the Annual Symposium on Computer-Human Interaction in Play (CHI PLAY '19)*. Association for Computing  
 175 Machinery, New York, NY, USA, 225–237. <https://doi.org/10.1145/3311350.3347155>
- 176 [2] Howard S. Becker. 1953. Becoming a Marihuana User. *Amer. J. Sociology* 59; Jg. 1953-11-01, 3 (1953), 235–242. <https://doi.org/10.1086/221326>
- 177 [3] Pierre Bourdieu. 1984. *Distinction: A social critique of the judgement of taste*. Harvard university press.
- 178 [4] Pierre Bourdieu. 1993. *Sociology in question*. Sage, London u.a. <http://www.loc.gov/catdir/enhancements/fy0656/93086215-d.html>;  
 179 <http://www.loc.gov/catdir/enhancements/fy0656/93086215-t.html>;  
 180 <https://external.dandelon.com/download/attachments/dandelon/ids/CH0012A0DF40780FE89B9C1257E7C0037EB97.pdf>
- 181 [5] Manu J. Brueggemann, Vanessa Thomas, and Ding Wang. 2018. Lickable Cities: Lick Everything in Sight and on Site. In *Extended Abstracts of  
 182 the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18)*. Association for Computing Machinery, New York, NY, USA, 1–10.  
 183 <https://doi.org/10.1145/3170427.3188399>
- 184 [6] Tom Gayler, Corina Sas, and Vaiva Kalnikaite. 2019. Taste Your Emotions: An Exploration of the Relationship between Taste and Emotional  
 185 Experience for HCI. In *Proceedings of the 2019 on Designing Interactive Systems Conference (DIS '19)*. Association for Computing Machinery, New  
 186 York, NY, USA, 1279–1291. <https://doi.org/10.1145/3322276.3322336>
- 187 [7] Daniel Harley, Alexander Verni, Mackenzie Willis, Ashley Ng, Lucas Bozzo, and Ali Mazalek. 2018. Sensory VR: Smelling, Touching, and Eating  
 188 Virtual Reality. In *Proceedings of the Twelfth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '18)*. Association for  
 189 Computing Machinery, New York, NY, USA, 386–397. <https://doi.org/10.1145/3173225.3173241>
- 190 [8] Antoine Hennion. 2007. Those things that hold us together: Taste and sociology. *Cultural sociology* 1, 1 (2007), 97–114.
- 191 [9] Fatima Jonsson and Harko Verhagen. 2011. Senses Working Overtime: On Sensuous Experiences and Public Computer Game Play. In *Proceedings of  
 192 the 8th International Conference on Advances in Computer Entertainment Technology (ACE '11)*. Association for Computing Machinery, New York, NY,  
 193 USA. <https://doi.org/10.1145/2071423.2071493>
- 194 [10] Li Li, Tegawendé F Bissyandé, Mike Papadakis, Siegfried Rasthofer, Alexandre Bartel, Damien Octeau, Jacques Klein, and Le Traon. 2017. Static  
 195 analysis of android apps: A systematic literature review. *Information and Software Technology* 88 (2017), 67–95.
- 196 [11] Yefeng Liu, Todorka Alexandrova, Satoshi Hirade, and Tatsuo Nakajima. 2013. Facilitating Natural Flow of Information among "Taste-Based" Groups.  
 197 In *CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13)*. Association for Computing Machinery, New York, NY, USA,  
 198 871–876. <https://doi.org/10.1145/2468356.2468512>
- 199 [12] Marianna Obrist, Rob Comber, Sriram Subramanian, Betina Piqueras-Fiszman, Carlos Velasco, and Charles Spence. 2014. Temporal, Affective, and  
 200 Embodied Characteristics of Taste Experiences: A Framework for Design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing  
 201 Systems (CHI '14)*. Association for Computing Machinery, New York, NY, USA, 2853–2862. <https://doi.org/10.1145/2556288.2557007>
- 202 [13] Marianna Obrist, Carlos Velasco, Chi Thanh Vi, Nimesha Ranasinghe, Ali Israr, Adrian D. Cheok, Charles Spence, and Ponnampalam Gopalakr-  
 203 ishnakone. 2016. Touch, Taste, & Smell User Interfaces: The Future of Multisensory HCI. In *Proceedings of the 2016 CHI Conference Ex-  
 204 tended Abstracts on Human Factors in Computing Systems (CHI EA '16)*. Association for Computing Machinery, New York, NY, USA, 3285–3292.  
 205 <https://doi.org/10.1145/2851581.2856462>
- 206 [14] Nimesha Ranasinghe, Adrian David Cheok, and Ryohei Nakatsu. 2012. Taste/IP: The Sensation of Taste for Digital Communication. In *Proceedings of  
 207 the 14th ACM International Conference on Multimodal Interaction (ICMI '12)*. Association for Computing Machinery, New York, NY, USA, 409–416.  
 208 <https://doi.org/10.1145/2388676.2388768>
- 209 [15] Nimesha Ranasinghe, Gajan Suthokumar, Kuan-Yi Lee, and Ellen Yi-Luen Do. 2015. Digital Flavor: Towards Digitally Simulating Virtual Flavors. In  
 210 *Proceedings of the 2015 ACM on International Conference on Multimodal Interaction (ICMI '15)*. Association for Computing Machinery, New York, NY,

209 USA, 139–146. <https://doi.org/10.1145/2818346.2820761>

210 [16] Risa Suzuki, Shutaro Homma, Eri Matsuura, and Ken-ichi Okada. 2014. System for Presenting and Creating Smell Effects to Video. In *Proceedings*  
211 *of the 16th International Conference on Multimodal Interaction (ICMI '14)*. Association for Computing Machinery, New York, NY, USA, 208–215.  
212 <https://doi.org/10.1145/2663204.2663269>

213 [17] Geneviève Teil and Antoine Hennion. 2004. Discovering quality or performing taste? A sociology of the amateur. *Qualities of food* 19 (2004).

214 [18] Jane Webster and Richard T. Watson. 2002. Analyzing the past to prepare for the future: writing a literature review. *MIS Quarterly* 26, 2 (2002),  
215 13–21.

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260