

JAHRESBERICHT 2022

Allgemeine Psychologie und Methodologie



**Fakultät für Psychologie
Universität Basel**

JAHRESBERICHT 2022

Allgemeine Psychologie und Methodologie

Mitarbeiterinnen und Mitarbeiter der Abteilung (per 31.12.2022)

Abteilungsleitung

Prof. Dr. Klaus Opwis

Administration

B.Sc. Ariane Haller

Assistierende

Dr. Florian Brühlmann
M.Sc. Lena F. Aeschbach
M.Sc. Sebastian Perrig
M.Sc. Nicolas Scharowski

Hilfsassistierende

B.Sc. Antony Berbert de Castro Hüsler
B.Sc. Nick von Felten
B.Sc. Ariane Haller
B.Sc. Melanie Svab
B.Sc. Léane Wettstein
B.Sc. Memeti Zgjim

Lehrbeauftragte

Dr. Javier Bargas-Avila (HS 2022)
Dr. Julia Martinis-Bopp (FS 2022, HS 2022)
Prof. Dr. Andreas Gold (FS 2022, HS 2022)
Dr. Chri Hübscher (FS 2022)
Prof. Dr. Ester Reijnen (FS 2022)
Prof. Dr. Christian Rösler (FS 2022, HS 2022)
Dr. Mirjam Seckler (FS 2022)
M.Sc. Beat Vollenwyder (HS 2022)

Kurze Chronologie des Jahres 2022

Kurzer chronologisch geordneter Gesamtüberblick über bemerkenswerte Vorkommnisse im Jahr 2022 Sicht der Abteilung für Allgemeine Psychologie und Methodologie

Im Sommer 2022 konnte erneut das Projekt “ISQ mit Kommentaranalyse» für das Eidgenössische Departement für auswärtige Angelegenheiten EDA durchgeführt werden.

Im November 2022 nahmen zahlreiche Angehörige der Abteilung persönlich an der internationalen *CHI Play* Konferenz teil, die vom 2. bis 5. November 2022 in Bremen stattfand.

Zwischen Mai und Dezember konnte von einem Team von Mitarbeitenden der MMI mit studentischer Unterstützung gemeinsam mit der BLT Baselland Transport AG das Forschungsprojekt «Eye Tracking Evaluation CBTC Waldenburgerbahn 2022» durchgeführt werden.

Weitere besonders bemerkenswerte Vorkommnisse sind für 2022 keine zu berichten. Die Situation war bis in den Herbst weiterhin durch die andauernde Pandemie dominiert. Als Folge war der direkte persönliche Kontakt und Austausch auf ein Minimum beschränkt. Eine sehr schwierige Situation für alle... Allerdings konnte das Herbstsemester erfreulicherweise wieder unter halbwegs «normalen» Bedingungen und weitgehend in Präsenzform stattfinden.

Personalia in 2022

Januar 2022

Antony Berbert de Castro Hüsler beginnt seine Tätigkeit als Hilfsassistent in der Abteilung.

September 2022

Léane Wettstein beginnt ihre Tätigkeit als neue Hilfsassistentin in der Abteilung.

Drittmittel in 2022

2022 konnten Drittmittel im Umfang von rund CHF 60'000 erfolgreich eingeworben werden, die insbesondere zur Finanzierung zusätzlicher Personalanstellungen (Lehrbeauftragte, Assistierende, Doktorierende, Hilfsassistierende) genutzt wurden.

Lehrveranstaltungen

Frühlingssemester 2022

Bachelorstudium

Unser Handeln – vorhersagbar irrational? (Reijnen)
Lernschwierigkeiten: Ursachen, Diagnose, Prävention und Intervention (Gold, LA)
Empirisch-Experimentelles Projektseminar (Aeschbach)
Wie schreibe ich eine Bachelorarbeit in der Mensch Maschine Interaktion?
(Aeschbach, Brühlmann, Opwis, Perrig, Scharowski)

Masterstudium

Aktuelle Forschungsthemen der Mensch-Maschine Interaktion I
(Aeschbach, Brühlmann, Perrig, Scharowski)
Online Forschung in der MMI: Fragebogenkonstruktion und Analyse (Brühlmann, Perrig)
Usability-Testing: Evaluation der Mensch-Maschine Interaktion (Brühlmann, Scharowski & Seckler, LA)
Konzeption und Design von User Interfaces II (Hübscher, LA)
Einführung in die Analytische Psychologie C.G. Jung (Roesler, LA)
Praxis der analytischen Psychotherapie C.G. Jungs: Anwendung und Vertiefungen (Roesler, LA)

Masterprojekte

Mensch-Maschine Interaktion (Aeschbach, Brühlmann, Opwis, Perrig, Scharowski)

Doktoratskolloquium am 8. Juni 2022

Medizinische Piktogramme (Lea Laasner)
Night work and the circadian rhythm of X-ray baggage screening performance at airports
(Robin Riaz a Porta)
Measuring UX (Sebastian Perrig)
Human Centered Artificial Intelligence (HCAI) (Nicolas Scharowski)
Theory Craft: Die Theorie-Praxis Lücke in der HCI Games Forschung (Elisa Mekler)

Master of Advanced Studies in Human Computer Interaction Design (MAS-HCID)

Psychologie: Einführung in die Kognitive Psychologie (Opwis)

Herbstsemester 2022

Bachelorstudium

Kognitive Psychologie I: Wahrnehmung, Aufmerksamkeit, Gedächtnis
(Propädeutische Vorlesung; Opwis)
Einführung in die Mensch Maschine Interaktion (Bargas-Avila, LA)
Empirisch-Experimentelles Projektseminar (Scharowski)
Wie schreibe ich eine Bachelorarbeit in der Mensch Maschine Interaktion?
(Aeschbach, Brühlmann, Opwis, Perrig, Scharowski & Martinis-Bopp, LA)
Einführung in die Analytische Psychologie C.G. Jung (Roesler, LA)
Praxis der analytischen Psychotherapie C.G. Jungs: Anwendung und Vertiefungen (Roesler, LA)

Masterstudium

Gedächtnisforschung aus kognitionspsychologischer Sicht (Opwis)
Player Experience: Games User Research (Aeschbach)
Lesen und Lernen mit digitalen Medien (Gold, LA)
Webentwicklung für Psychologen:innen (Brühlmann, Vollenwyder)
Forschungsmethoden der Mensch Maschine Interaktion I (Aeschbach, Brühlmann, Perrig,
Scharowski, Vollenwyder)

Masterprojekte

Mensch Maschine Interaktion (Aeschbach, Brühlmann, Opwis, Perrig, Scharowski)

Doktoratskolloquium am 21. September 2022

Leistungsmessungen an Sicherheitskontrollstellen (Daniela Buser)
Vorstellung einer Längsschnittstudie zur Neugestaltung der SBB Mobile App (Beat Vollenwyder)

Publikationen in 2022

Peer-Reviewed Artikel und Beiträge

*Aeschbach, L.F., Opwis, K. & Brühlmann, F. (2022). Breaking immersion: A theoretical framework of alienated play to facilitate critical reflection on interactive media. *Frontiers in Virtual Reality, Volume 3*, 1-14.*

There is a growing interest in understanding how to best represent complexity using IDNs. We conceptualize this as the aim to make players of such IDNs reflect critically on the complexity being represented. We argue that current understandings of player experience do not lend themselves to this aim. Research on interactive media has assumed immersion to be a universal positive for the player experience. However, in this article we argue that immersion into the Magic Circle of an IDN could be antagonistic to a critical experience. This is because immersion persuades players into suspending their disbelief, rather than facilitating critical reflection. Instead we propose, on the basis of the Epic Theater, an alternative form of play called alienated play. Meaning, a form of play in which the player is playing, while also observing themselves play. This form of play should allow for players to benefit from the enjoyable nature of play, while simultaneously remaining at a critical distance. To illustrate our theory we design two models, one for immersed play and one for alienated play. Furthermore, we present examples of the design for alienation in commercial video games, as well as hypotheses to test out theory in future research. Therefore, this work contributes an initial theoretical and practical informed form of play, specifically designed to facilitate critical reflection on IDNs representing complexity.

Ruf, A., Zahn, C., Agota, D., Iten, G. & Opwis, K. (2022). Aesthetic design of app interfaces and their impact on secondary students' interest and learning. *Computers and Education Open* (2, 12 pages).

Interest in science topics is an important prerequisite for science learning and achievement. Here, as part of a field experiment, we studied whether teenagers' interest and learning of physics topics would be influenced by the aesthetics of a multimedia learning app. More specifically, we investigated with the example of learning about energy (types of power plants) how different interface designs of a multimedia learning app would influence aesthetic experience, interest, and learning outcome. In our study Swiss high school students (N = 108) were assigned to one of two conditions (i.e., game-style vs. industrial-style) differing in various aesthetic features. Results indicate that high-quality interfaces support learning and expressive aesthetic design features additionally foster interest in order to engage with the topic. Moreover, our findings on aesthetic experience suggest that deep perceptual processes, such as emotion and cognitive stimulation induced by interfaces, further impact interest and learning. Thus, our study gives implications for the design of interest-generating and learning-supporting science apps for teenagers and emphasizes the significance to consider aesthetic experience in future research.

Kurzbeiträge / Vorträge / Poster/ Publizierte (peer-reviewed) Extended Abstracts

*Memeti, Z., Brühlmann, F. & Perrig, S. AC. (2022). LoL, Why do you even play? Validating the motives for online gaming questionnaire in the context of League of Legends. *Extended Abstracts of the 2022 Annual Symposium on Computer-Human Interaction in Play (Bremen, 2-5 november)*, 81-86.*

Motives are essential concepts in understanding a player's experience in video games. We report and describe the analysis of a widely used questionnaire to measure players' motives in video games, the Motives for Online Gaming Questionnaire (MOGQ). The present research aimed to investigate the psychometric quality of the MOGQ in the context of League of Legends (LoL). The MOGQ is a 27-item self-report scale designed to measure the motives for playing online games. To this end, 256 participants completed an online survey asking about their experiences and motives to play LoL. Results of confirmatory and exploratory factor analyses indicate weaknesses in the original 7-factor model. By removing five conspicuous items from the original 7-factor model, we propose an alternative 22-item version of the MOGQ. Additional confirmatory and exploratory factor analyses results indicate that the 22-item version of the MOGQ is more suitable in the context of LoL than the original 27-item questionnaire. However, further investigation into the quality of this alternative version compared to the original questionnaire is needed.

Scharowski, N., Perrig, S. AC., von Felten, N. & Brühlmann, F. (2022). Trust and reliance in XAI – Distinguishing between attitudinal and behavioral measures. *ACM Conference on Human Factors in Computing Systems (CHI 2022): Workshop on Trust and Reliance in AI-Human Teams. New Orleans, USA (20.4.- 6.5. 2022)*.

Trust is often cited as an essential criterion for the effective use and real-world deployment of AI. Researchers argue that AI should be more transparent to increase trust, making transparency one of the main goals of XAI. Nevertheless, empirical research on this topic is inconclusive regarding the effect of transparency on trust. An explanation for this ambiguity could be that trust is operationalized differently within XAI. In this position paper, we advocate for a clear distinction between behavioral (objective) measures of reliance and attitudinal (subjective) measures of trust. However, researchers sometimes appear to use behavioral measures when intending to capture trust, although attitudinal measures would be more appropriate. Based on past research, we emphasize that there are sound theoretical reasons to keep trust and reliance separate. Properly distinguishing these two concepts provides a more comprehensive understanding of how transparency affects trust and reliance, benefiting future XAI research.

Von Felten, N., Brühlmann, F. & Perrig, S. AC. (2022). Independent validation of the video game dispositional flow scale with League of Legends players. *Extended Abstracts of the 2022 Annual Symposium on Computer-Human Interaction in Play (Bremen, 2-5 november), 44-50*.

Flow is a highly influential concept across many research domains. Because of the close links between enjoyment and flow, it is also a central concept in game research. Accordingly, many measurement instruments in the form of questionnaires have been developed to measure flow in video games. However, limited independent validation work has been carried out to date. In this project, we evaluated the recently developed Video Game Dispositional Flow Scale (VGDFS) in the context of League of Legends. An online survey posted on the online community reddit.com yielded a sample of $N = 140$. Confirmatory factor analysis did not support the originally proposed structure. Subsequent exploratory factor analysis resulted in inconclusive findings. Convergent validity with other questionnaires for the measurement of interest, enjoyment, and flow could be demonstrated in our data, although with unusually high correlations between the VGDFS and another flow measure. For divergent validity, correlations with questionnaires for the measurement of boredom and trait anxiety in the hypothesized direction could be found. Findings suggest that the VGDFS needs further evaluation in different video game contexts while also hinting at measurement problems possibly related to conceptual issues with flow.

Qualifikationsarbeiten (Abschluss in 2022)

Dissertationen

Reymond, Claire (2022). *The presentation of images: Effects on the viewer's reaction*. (Datum der Disputation: 4. April 2022).

Ruf, Alessia (2022). *The impact of digital learning environments on science learning: Two possible ways to foster cognitive learning processes*. (Datum der Disputation: 30. Mai 2022).

Masterarbeiten

Lüthi, Camille (2022). *Measuring expertise! First steps in the development and validation of the perceived expert knowledge survey*.

Margelli, Daphne Petala Naomi (2022). *Experience of Enjoyment and appreciation in sadness-inducing video games*.

Paro, Damian (2022). *Screen time and psychological well-being: Examining retrospective and actual screen time, how it relates to psychological well-being and testing the effectiveness of Apple's screen time functionality.*

Bachelorarbeiten

Bader, Joel Dominic (2022). *Influence of cybersickness on the technology acceptance model in the context of virtual reality.*

Buser, Joelle (2022). *Cultural differences in website design regarding usability and aesthetics.*

Can Özgü, Emre (2022). *Beyond mere fun: What constitutes the eudaimonic experience in digital games?*

Curti, Jessica Naomi (2022). *Positive effects of Online-Communities on the well-being of adolescents during COVID-19.*

De Castro Hüsler, Antony Berbert (2022). *A systematic review on the effectiveness of digital game-based learning in primary and secondary education compared to traditional teaching methods.*

Feig, Laura (2022). *Gaming and its influence on depression and social anxiety.*

Fent, Luisa (2022). *Enjoyment of positive and negative emotions in games.*

Götz, Nadia (2022). *Measuring enjoyment: Overview and comparison of PXI and PENS.*

Holzer, Amanda (2022). *What are applicable definitions of trust in AI?*

Honda, Marimo (2022). *How character attachment influences our willingness to spend on Gachagames.*

Kinir, Alisha (2022). *Measuring aesthetics in HCI: Comparison of the scales of Lavie & Tractinsky and the VisAWI.*

Küttel, Enola (2022). *Staying connected during COVID-19 - How Online Gaming positively affects People's Well-being during the Pandemic.*

Mullis, Sara (2022). *The relationship between trust and reliance in automation and AI.*

Oswald, Nikolas (2022). *A comparative approach to identification with different forms of media characters.*

Roos, Fides (2022). *Emotional attachment towards player characters and non-player characters.*

Stalder Ramona (2022). *Social media during social distancing.*

Tran, Lisa (2022). *Relationship with player characters and game experience.*

Ünlü, Azize (2022). *Effects of aesthetics and usability on user preference Pre- and Post-Use.*

Wettstein, Léane (2022). *Cognitive biases in Human-AI interaction: Reviewing frameworks for the conceptualization of cognitive biases in the context of AI.*

Ziba, Erjon (2022). *The constructs of aesthetics and usability analysed in current Human-Computer-Interaction literature.*

Masterstudierende (per 31. Dezember 2022)

Alt, Roman
Bader, Joel
Bornand, Elea
Haller, Ariane
Honda, Marimo
Imhof, Sarah Juliana
Jeker, Rahel
Kaufmann, Yannick
Memeti, Zgjim
Mullis, Sara
Oswald, Nikolas
Pasche, Eva Sophia
Sinnathurai, Sukirthan
Sivananthan, Lacshigan
Stalder, Marion
Von Felten, Nick
Wettstein, Léane

Doktorandinnen und Doktoranden (per 31. Dezember 2022)

Aeschbach, Lena F.
Buder, Daniela
Catarci, Daniele
Draxi, Deborah
Henzen, Nicolas
Laasner, Lea
Linxen, Sebastian
Olbrecht, Danilo
Paneth, Lisa
Perrig, Sebastian
Riz à Porta, Robin
Scharowski, Nicolas
Schmid, Birgit
Vollenwyder, Beat
Wyssenbach, Thomas
Wüst, Alexandra