

# JAHRESBERICHT 2016

## Allgemeine Psychologie und Methodologie

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**Fakultät für Psychologie  
Universität Basel**

# JAHRESBERICHT 2016

## *Allgemeine Psychologie und Methodologie*

### **Mitarbeiterinnen und Mitarbeiter der Abteilung (per 31.12.2016)**

<i>Abteilungsleitung</i>	Prof. Dr. Klaus Opwis
<i>Administration</i>	Dr. Silvia Heinz
<i>Wissenschaftliche Mitarbeitende</i>	Dr. Markus Stöcklin
<i>Assistierende</i>	M.Sc. Julia Ayumi Bopp M.Sc. Florian Brühlmann M.Sc. Glena Iten M.Sc. Sharon Steinemann
<i>Hilfsassistierende</i>	B.Sc. Lena Aeschbach B.Sc. Seamus Forde B.Sc. Mathias Jenny B.Sc. Livia Müller B.Sc. Laura Quintana Gomez
<i>Lehrbeauftragte</i>	Dr. Javier Bargas-Avila (FS 2016, HS 2016) Prof. Dr. Andreas Gold (FS 2016) Christian Hübscher (FS 2016) Dr. Stefan Leuthold (HS 2016) Prof. Dr. Christian Rösler (FS 2016, HS 2016)
<i>IT-Mitarbeiter</i>	Lars Frasseck

## Kurze Chronologie des Jahres 2016

*Kurzer chronologisch geordneter Gesamtüberblick über bemerkenswerte Vorkommnisse im Jahr 2016 Sicht der Abteilung für Allgemeine Psychologie und Methodologie*

### Januar 2016

Die *Schweizerische Anorexia Nervosa Stiftung* bewilligt für das Kooperationsprojekt mit der Abteilung für Klinische Psychologie und Psychotherapie der Universität Fribourg (Prof. Dr. Simone Munsch) *Binge-eating disorder treatment goes online* einen Betrag in Höhe von CHF 144'605, wovon ca. CHF 20'000 zur Finanzierung einer Hilfsassistentin in Basel vorgesehen sind.

Die *Schweizerische Bundeskanzlei* bewilligt für die Durchführung einer Studie zum Zugang zu elektronischen Behördenleistungen einen Betrag in Höhe von rund CHF 50'000.

### Februar 2016

Die *Hasler Stiftung* bewilligt für die Reise- und Teilnahmekosten zum Besuch der *34rd Annual Conference on Human Factors in Computing Systems (CHI 2016)* in San Jose, Kalifornien (USA) einen Betrag in Höhe von CHF 15'000. Die Reisegruppe besteht aus einer Post-Doc (Elisa Mekler), drei Doktorierenden (Florian Brühlmann, Gian-Marco Schmid, Sharon Steinemann) und sechs Masterstudierenden (Orlando Bernhard, Julia Bopp, Fabian Martinis, Benedikt Merz, Livia Müller und Denise Rieser) des Basler Forschungsschwerpunkts *Mensch-Maschine Interaktion*.

## Ehrungen/Auszeichnungen

Der bei der *Annual ACM Conference on Human Factors in Computing Systems (CHI 2016, San Jose, California, USA, 7. –12. Mai 2016)* eingereichte Konferenzbeitrag *Momentary Pleasure or Lasting Meaning? Distinguishing Eudaimonic and Hedonic User Experiences* von *Elisa D. Mekler* und *Kasper Hornbæk* wurde mit einem *CHI Best Paper Award* ausgezeichnet. Von den insgesamt rund 2325 eingereichten Beiträgen wurde dieser Award 23 Beiträgen zuerkannt (resp. den „top 1%“ aller Beiträge).

Der bei der *Annual ACM Conference on Human Factors in Computing Systems (CHI 2016, San Jose, California, USA, 7. –12. Mai 2016)* eingereichte Konferenzbeitrag *Negative emotion, positive experience?* von *Julia Bopp, Elisa D. Mekler und Klaus Opwis* wurde mit einem *CHI Honorable Mention Award* ausgezeichnet. Von den insgesamt mehr als 2300 Beiträgen wurde dieser Award 92 Beiträge zuerkannt (resp. den „top 4%“ aller Beiträge).

Die Masterarbeiten von *Julia A. Bopp (Negative emotion, positive experience? Emotionally moving moments in digital games)*, *Florian Brühlmann (The effects of framing in gamification: A study of failure)* und *Gian-Marco Schmid (Evaluation of musical instruments from the musician's perspective: A questionnaire for assessing the musician's perception of the experiential qualities of musical instruments)* werden vom Wissenschaftsverlag *Springer* (Heidelberg) im Rahmen seiner Initiative *Psychologie BestMasters 2016 Award* zur Förderung des wissenschaftlichen Nachwuchses unter den besten 25 Masterarbeiten der Psychologie aus Deutschland, Österreich und der Schweiz prämiert (September 2016).

## **Berufungen**

Iris-Katharina Penner, langjährige Mitarbeiterin der Abteilung, wird per 1. Juli 2016 zur *Titularprofessorin für Kognitive Neuropsychologie und Neuroregeneration* an der Medizinischen Fakultät der Heinrich-Heine Universität Düsseldorf ernannt.

## **Personalia in 2016**

### *Januar 2016*

Florian Brühlmann beginnt nach seinem erfolgreichen Masterstudium seine Tätigkeit als neuer Universitätsassistent in der Abteilung.

Thomas Keller beginnt nach seinem erfolgreichen Masterstudium eine drittmittelfinanzierte Assistenz.

Livia Müller und Laura Quintana beginnen neu als Hilfsassistentinnen.

### *Februar 2016*

Alex Tuch beendet seine langjährige Tätigkeit als Oberassistent und wechselt an das Bundesamt für Statistik.

Mathias Jenny und Seamus Forde beginnen neu als Hilfsassistenten.

### *August 2016*

Elisa Mekler wechselt für einen Forschungsaufenthalt zur Forschungsgruppe von Prof. Dr. Lennart Nacke an die University of Waterloo (Kanada).

Julia Ayumi Bopp beginnt nach ihrem erfolgreichen Masterstudium eine drittmittelfinanzierte Assistenz.

Thomas Keller wechselt in die Privatwirtschaft.

### *Oktober 2016*

Lena Aeschbach beginnt neu als Hilfsassistentin.

## **Drittmittel in 2016**

2016 konnten Drittmittel im Umfang von rund CHF 100'000 erfolgreich eingeworben werden, die insbesondere zur Finanzierung zusätzlicher Personalanstellungen (Lehrbeauftragte, Assistierende, Doktorierende, Hilfsassistentierende) genutzt wurden.

## **Lehrveranstaltungen**

### ***Frühlingssemester 2016***

#### *Bachelorstudium*

Forschungsmethoden und Statistik II (Propädeutische Vorlesung mit Übung; Stöcklin & Opwis)

Lernschwierigkeiten: Ursachen, Diagnose, Prävention und Intervention (Gold, LA)

Empirisch-Experimentelles Projektseminar (Iten, Steinemann)

Wie schreibe ich eine Bachelorarbeit in der Mensch Maschine Interaktion?

(Mekler & Opwis)

Einführung in die Analytische Psychologie C.G. Jung (Roesler, LA)

Praxis der analytischen Psychotherapie C.G. Jungs: Anwendung und Vertiefungen (Roesler, LA)

#### *Masterstudium*

Game on! Psychologie der digitalen Spiele (Brühlmann & Mekler)

Zentrale Konzepte der User Experience-Forschung (Iten)

Usability-Testing: Evaluation der Mensch Maschine Interaktion (Bargas-Avila, LA, & Heinz)

Auf Jobsuche – was nun? Wie bewirbt man sich im Bereich der Mensch-Maschine Interaktion

(Bargas-Avila, Heinz, Mekler & Seckler)

Konzeption und Design von User Interfaces I (Hübscher, LA)

Praxis der empirischen Forschung: Explorative multivariate Verfahren (Stöcklin)

Einführung in erkenntnis- und wissenschaftstheoretische Fragen (Stöcklin)

#### *Masterprojekte*

Mensch Maschine Interaktion (Mekler, Opwis, Steinemann & Tuch)

Experimentelle Kognitionsforschung über die Lebensspanne (Iten & Opwis)

### *Doktoratskolloquium am 24. Februar 2016*

Impact of customization on self-regulation and procrastination (Glena Iten)

Kurzpräsentation neue Doktorierende (Florian Brühlmann, Yanik Sterchi, Beat Vollenwyder)

### ***Herbstsemester 2016***

#### *Bachelorstudium*

Kognitive Psychologie I: Wahrnehmung, Aufmerksamkeit Gedächtnis

(Propädeutische Vorlesung; Opwis)

Forschungsmethoden & Statistik I (Propädeutische Vorlesung mit Übung; Stöcklin & Opwis)

Einführung in die Mensch Maschine Interaktion (Bargas-Avila, LA)

Forschungsmethoden & Statistik III (Stöcklin & Opwis)

Empirisch-Experimentelles Projektseminar (Bopp, Steinemann)

Wie schreibe ich eine Bachelorarbeit in der Mensch Maschine Interaktion?

(Brühlmann, Iten, Steinemann)

Einführung in die Analytische Psychologie C.G. Jung (Roesler, LA)

Praxis der analytischen Psychotherapie C.G. Jungs: Anwendung und Vertiefungen (Roesler, LA)

*Masterstudium*

Ästhetik: Wahrnehmungsforschung aus kognitionspsychologischer Sicht (Opwis)  
Theoretische Grundlagen und Modelle der Mensch Maschine Interaktion (Leuthold)  
Aktuelle Forschungsthemen der Mensch Maschine Interaktion (Iten & Steinemann)  
Eye-Tracking Methoden in der Mensch Maschine Interaktion (Brühlmann & Heinz)  
Praxis der empirischen Forschung: Strukturgleichungsmodelle (Stöcklin)

*Masterprojekte*

Mensch Maschine Interaktion (Brühlmann, Iten, Opwis & Steinemann)  
Experimentelle Kognitionsforschung über die Lebensspanne (Iten/Opwis)

*Doktoratskolloquium am 28. September 2016*

ROC curves and detection measures in X-ray security screening (Yanik Sterchi)

Können wir unseren Daten vertrauen? Ein Beitrag zur Datenqualität von Online Studien (Florian Brühlmann)

Vorstellungsrunde neue Doktorierende: Julia A. Bopp, Swen Kühne.

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

Psychologie: Einführung in die Kognitive Psychologie (Opwis)

Eye Tracking (Tuch)

## Publikationen in 2016

### Buchveröffentlichungen, Forschungsmonographien

Brühlmann, F. (2016). *The Effects of Framing in Gamification A Study of Failure*. Wiesbaden: Springer BestMasters Psychology.

Schmid, G.-M. (2016). *Evaluation of musical instruments from the musician's perspective: A questionnaire for assessing the musician's perception of the experiential qualities of musical instruments*. Wiesbaden: Springer BestMasters Psychology.

### In der bibliometrischen Datenbank SCOPUS erfasste Artikel und Beiträge <sup>1</sup>

Abeele, V.V., Nacke, L.E., Mekler, E.D. & Johnson, D. (2016). Design and preliminary validation of the players experience inventory. *Proceedings of the 3rd Annual ACM SIGCHI Conference on Computer-Human Interaction in Play (CHI PLAY 2016, Austin, Texas, USA, 16.–19. October 2016)*, 335-341. <sup>2</sup>

We present the design and preliminary results of the validation of the Player Experience Inventory (PXI). Based on the input of 64 experts in the field of playercomputer interaction, we designed and refined this new scale. Our scale is based on the MDA framework (and on Means-End theory, underlying MDA). The PXI incorporates two subscales, one with dimensions at the functional level (i.e., dynamics) and one at the psychosocial level (i.e., aesthetics). The initial results, via principal factor analysis, suggest the scale can be used accurately to evaluate player experience. This work is our first step towards presenting a new, validated survey instrument for player experience evaluation.

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<sup>1</sup> Nachfolgende Angaben zu den einzelnen Zeitschriften sind entnommen einerseits dem *Journal Citation Reports (JCR) Science Edition* resp. *Social Science Edition* aus dem *ISI Web of Science (Impact Factor der Zeitschrift / durchschnittlicher Impact Factor der letzten 5 Jahre / Kategorie: Rangplatz - Anzahl Zeitschriften - Quartil)* respektive andererseits - nach dem doppelten Trennstrich (//) - dem *SCImago Journal & Country Rank Portal* auf der Grundlage von *SCOPUS (Bereich/Schwerpunkt: Rangplatz - Anzahl Zeitschriften - Quartil)*.

*Erläuterung:* Beispielsweise hat die Zeitschrift *Computers in Human Behavior* laut JCR für das Jahr 2010 einen *Impact Factor (IF)* von 1.9. Der durchschnittliche IF der vorausgegangenen fünf Jahre (2006 bis 2010) beträgt 2.3. Die Zeitschrift ist im JCR in zwei verschiedenen Kategorien gelistet: In der Kategorie *Psychology, Experimental*, wo sie nach ihrem IF den Rangplatz 37 von den dort insgesamt 81 gelisteten Zeitschriften belegt und damit einen Rangplatz im 2. Quartil (Q2). Ebenfalls gelistet ist die Zeitschrift in der Kategorie *Psychology, Multidisciplinary*. Dort belegt sie mit ihrem Rangplatz 26 von insgesamt 120 Zeitschriften einen Platz im 1. Quartil (Q1). SCImago listet die Zeitschrift *Computers in Human Behavior* in drei verschiedenen Kategorien (Angaben für das Jahr 2010): Im Bereich (*subject area*) *Computer Science* und dort im Schwerpunkt (*subject category*) *Computer Science Applications* (Rangplatz 54 von 194 Zeitschriften, Q2); im Bereich *Psychology* und dort im Schwerpunkt *Developmental and Educational Psychology* (Rangplatz 29 von 91 Zeitschriften, Q2) sowie im Bereich *Psychology* und dort im Schwerpunkt *Experimental and Cognitive Psychology* (Rangplatz 36 von 53 Zeitschriften, Q3). Die Rankreihung erfolgt jeweils auf der Grundlage des *SCImago Journal Rank Indicator (SJR)*, einem speziell normierten Mass für den Impact einer Zeitschrift auf Basis der Einträge in SCOPUS.

Durch Fettdruck im folgenden hervorgehoben sind **Rangplätze im 1. Quartil (Q1)**.

<sup>2</sup> Keine Angaben vorhanden // Keine Angaben vorhanden.

Adamski, N., Adler, M., Opwis, K. & Penner, I.-K. (2016). A pilot study on the benefit of cognitive rehabilitation in Parkinson's disease. *Therapeutic Advances in Neurological Disorders*, 9, 153-164.<sup>3</sup>

*Purpose:* Patients with Parkinson's disease (PD) show inefficiencies in cognitive performance including working memory functions. Since these problems impact on quality of life and overall well-being, the current study was aimed at improving patients' situations by evaluating the computerized cognitive training tool, BrainStim.

*Method:* A total of 19 healthy controls (HCs) and six patients with PD were included in the study. While all PD patients received cognitive training, the HC sample was subdivided into 12 subjects with training (HC-T) and 10 subjects without (HC-NT). Participants underwent a double baseline assessment, a post-training assessment, and a 3-month follow up on neuropsychological tests and self-report measures on fatigue and depression. Training was administered between the second baseline and postassessment. It comprised 16 supervised sessions according to a standardized training protocol over 4 weeks.

*Results:* Significant improvements in verbal and visuospatial short-term and long-term memory were found in both training groups. In addition, the HC-T improved on mental speed, and verbal and visuospatial working memory. Both training groups showed stable results for all short-term visuospatial measures after 3 months. Further, the HC-T showed stable results for working memory, verbal, and visuospatial short-term and long-term memory.

*Conclusions:* The efficacy of the applied computerized cognitive training tool BrainStim could be verified in patients with PD and healthy age-matched controls. The preliminary findings highlighted the suitability of a specific cognitive intervention to improve cognitive inefficiencies in patients with PD as well as in healthy older people. Further research on cognitive training in combination with PD drug therapy is needed to better understand the mutual interaction and to offer optimal therapeutic approaches to patients.

Bargas-Avila, J.A. & Brühlmann, F. (2016). Measuring user rated language quality: Development and validation of the user interface Language Quality Survey (LQS). *International Journal of Human-Computer Studies*, 86, 1-10.<sup>4</sup>

Written text plays a special role in user interfaces. Key information in interaction elements and content are mostly conveyed through text. The global context, where software has to run in multiple geographical and cultural regions, requires software developers to translate their interfaces into many different languages. This translation process is prone to errors – therefore the question of how language quality can be measured is important. This paper presents the development of a questionnaire to measure user interface language quality (LQS). After a first validation of the instrument with 843 participants, a final set of 10 items remained, which was tested again (N=690). The survey showed a high internal consistency (Cronbach's  $\alpha$ ) of .82, acceptable discriminatory power coefficients (.34–.47), as well as a moderate average homogeneity of .36. The LQS also showed moderate correlation to UMUX, an established usability metric (convergent validity), and it successfully distinguished high and low language quality (discriminative validity). The application to three different products (YouTube, Google Analytics, Google AdWords) revealed similar key statistics, providing evidence that this survey is product-independent. Meanwhile, the survey has been translated and applied to more than 60 languages.

Bopp, J.A., Mekler, E.D. & Opwis, K. (2016). Negative emotion, positive experience? *Proceedings of the 34rd Annual ACM Conference on Human Factors in Computing Systems (CHI 2016, San Jose, California, USA, 7. –12. Mai 2016)*, 2996-3006.<sup>5</sup>

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<sup>3</sup> IF(2015) = 2.6 / IF(5-Year) = 3.0 / *Clinical Neurology*: 80 – 193 – Q2 // *Medicine: Neurology (clinical)*: 94 – 329 – Q2 / *Neuroscience (Neurology)*: 233 – 514 – Q2 / *Pharmacology*: 87 - 333- Q2.

<sup>4</sup> IF(2015) = 3.0 / IF(5-Year) = 2.1 / ***Ergonomics*: 4 – 16 – Q1** / *Psychology, Multidisciplinary*: 50 – 129 – Q2 // *Computer Science: Human-Computer Interaction*: 28 – 82 – Q2 / ***Social Sciences: Human Factors and Ergonomics*: 8 - 28 – Q1**.

<sup>5</sup> Keine Angaben vorhanden // ***Computer Science: Human-Computer Interaction*: 61 – 346 – Q1** / ***Computer Science: Software* 259 – 1421 – Q1** / ***Computer Science: Computer Graphics and Computer-Aided Design*: 39 – 352 – Q1**.



Interest in the potential of games to provide unique emotional player experiences (PX) is growing. Yet there has been little empirical research on what emotions beyond 'fun' players experience in games, and whether players find these experiences rewarding at all. We analyzed 121 players' accounts of emotionally moving game experiences in terms of the feelings and thoughts they evoked, different PX constructs, as well as game-related and personal factors contributing to these. We found that most players enjoyed and appreciated experiencing negatively valenced emotions, such as sadness. Emotions were evoked by a variety of interactive and non-interactive game aspects, such as in-game loss, character attachment and (lack of) agency, but also personal memories, and were often accompanied by (self-)reflection. Our findings highlight the potential of games to provide emotionally rewarding and thought-provoking experiences, as well as outline opportunities for future research and design of such experiences. They also showcase that negative affect may contribute to enjoyment, thereby extending our notion of positive player experience.

Endress, S., Opwis, K. & Mekler, E.D. (2016). „It's like i would die as well“: Gratifications of fearful game experience. *Proceedings of the 3rd Annual ACM SIGCHI Conference on Computer-Human Interaction in Play (CHI PLAY 2016, Austin, Texas, USA, 16.–19. October 2016)*, 149-155. <sup>6</sup>

Emotional game experiences have garnered increasing attention over the past few years, both from players and researchers. Previous research has not yet explored whether and what gratifications players derive from frightening game experiences. Interviews with eight players revealed several gratifications, including experiencing non-mundane negative emotions, overcoming emotional challenges and identification with the avatar. Although identification was regarded positively and amplified the emotional intensity of the frightening game experience, sometimes this close connection with the avatar almost became too intense. Based on these findings, we discuss opportunities for future research.

Forde, S.F., Opwis, K. & Mekler, E.D. (2016). Informational, but not intrinsically motivating gamification? Preliminary findings. *Proceedings of the 3rd Annual ACM SIGCHI Conference on Computer-Human Interaction in Play (CHI PLAY 2016, Austin, Texas, USA, 16.–19. October 2016)*, 157-163. <sup>7</sup>

Motivational psychology suggests that informationally designed gamification can increase intrinsic motivation. However, there has been little empirical research to test this assumption. In a first experiment we compared whether a gamified and a non-gamified application differed in terms of usability, intrinsic motivation and need satisfaction. No significant differences emerged, yet descriptive data and participants' open-ended answers indicated that there were differences in how informational game elements such as scoreboards were perceived. We conclude with a discussion of implications and opportunities for future research.

Mekler, E.D., Birk, M.V., Rank, S., Iacovides, I. & Steinemann, S.T. (2016). Designing for emotional complexity in games: The interplay of positive and negative affect. *Proceedings of the 3rd Annual ACM SIGCHI Conference on Computer-Human Interaction in Play (CHI PLAY 2016, Austin, Texas, USA, 16.–19. October 2016)*, 367-371. <sup>8</sup>

Mekler, E.D. & Hornbæk, K. (2016). Momentary Pleasure or Lasting Meaning? Distinguishing Eudaimonic and Hedonic User Experiences. *Proceedings of the 34rd Annual ACM Conference on Human Factors in Computing Systems (CHI 2016, San Jose, California, USA, 7. –12. Mai 2016)*, 4509-4520. <sup>9</sup>

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<sup>6</sup> Keine Angaben vorhanden // Keine Angaben vorhanden.

<sup>7</sup> Keine Angaben vorhanden // Keine Angaben vorhanden.

<sup>8</sup> Keine Angaben vorhanden // Keine Angaben vorhanden.

<sup>9</sup> Keine Angaben vorhanden // **Computer Science: Human-Computer Interaction: 61 – 346 – Q1 / Computer Science: Software 259 – 1421 – Q1 / Computer Science: Computer Graphics and Computer-Aided Design: 39 – 352 – Q1.**

User experience (UX) research has expanded our notion of what makes interactive technology good, often putting hedonic aspects of use such as fun, affect, and stimulation at the center. Outside of UX, the hedonic is often contrasted to the eudaimonic, the notion of striving towards one's personal best. It remains unclear, however, what this distinction offers to UX research conceptually and empirically. We investigate a possible role for eudaimonia in UX research by empirically examining 266 reports of positive experiences with technology and analyzing its relation to established UX concepts. Compared to hedonic experiences, eudaimonic experiences were about striving towards and accomplishing personal goals through technology use. They were also characterized by increased need fulfillment, positive affect, meaning, and long-term importance. Taken together, our findings suggest that while hedonic UX is about momentary pleasures directly derived from technology use, eudaimonic UX is about meaning from need fulfillment.

*Merz, B., Tuch, A. & Opwis, K. (2016). Perceived User Experience of Animated Transitions in Mobile User Interfaces. Proceedings of the 34rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (Extended Abstracts CHI 2016, San Jose, California, USA, 7. –12. Mai 2016), 3152-3158.*<sup>10</sup>

Animated transitions are an important part of graphical user interface design practice. They can help to guide users' attention and highlight changes in the interface. However, there is only few empirical research on how such animated transitions influence the users' perception of an interface. We therefore aim to investigate how different animation principles for animated transitions in mobile applications influence dimensions of perceived user experience. In this late breaking work we present the results of a pilot study in which we tested the suitability of different animated transitions for our main study. Moreover, we outline a tentative design and procedure of the main study. We plan to recruit 300 participants that will rate different styles of animated transitions in regard to perceived pragmatic and hedonic quality. Our findings are expected to provide insights in users' perception of animation styles and therefore to have implications for graphical user interface design practice.

*Müller, L., Mekler, E. & Opwis, K. (2016). Hedonic Enjoyment And Personal Expressiveness In Positive User Experiences. Proceedings of the 34rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (Extended Abstracts CHI 2016, San Jose, California, USA, 7. –12. Mai 2016), 3166-3172.*<sup>11</sup>

Understanding different facets of positive user experience (UX) is of great interest to researchers. Recently, 'positive design' and fostering happiness through technology is gaining more attention. However, little empirical research exists about such different facets of UX. We adopted a concept from positive psychology that describes different facets of positive experiences: 'hedonic enjoyment' and 'personal expressiveness'. The aim of the present study was to explore how hedonic enjoyment and personal expressiveness relate to established UX concepts. Results suggest a more granular picture of UX, in that, hedonic enjoyment was associated with less negative affect and more stimulation, whereas personal expressiveness was correlated with more negative affect and psychological needs such as competence, relatedness, popularity and security. Based on these findings further implications and research possibilities are discussed.

*Ooi, Y.P., Goh, D.H.-L., Mekler, E.D., Tuch, AN., Boon, J., Ang, R.P., Fung, D. & Gaab, J. (2016). Understanding player perceptions of RegnaTales, a mobile game for teaching social problem solving skills. Proceedings of the ACM Symposium on Applied Computing (SAC 2016, Pisa, Italy, 4.–8. April 2016), 167-172.*<sup>12</sup>

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<sup>10</sup> Keine Angaben vorhanden // *Computer Science: Human-Computer Interaction: 61 – 346 – Q1 / Computer Science: Software 259 – 1421 – Q1 / Computer Science: Computer Graphics and Computer-Aided Design: 39 – 352 – Q1.*

<sup>11</sup> Keine Angaben vorhanden // *Computer Science: Human-Computer Interaction: 61 – 346 – Q1 / Computer Science: Software 259 – 1421 – Q1 / Computer Science: Computer Graphics and Computer-Aided Design: 39 – 352 – Q1.*

<sup>12</sup> Keine Angaben vorhanden // *Computer Science: Software 337 – 1421 – Q1.*

Research on the use of serious games to support child and adolescent mental health interventions is in its early stages. Work is needed to provide evidence of the applicability and effectiveness of using such games in teaching children skills needed to overcome their behavioral and emotional problems. The present study adds to the knowledge in this area through the development and evaluation of RegnaTales, a mobile game for teaching social problem solving skills among children. The study examined the playability and usability of the mobile game among 12 children (mean age = 9.58; SD = 1.78) from international schools in Basel. Results showed that 76% of participants found the game fun and 58% would play it again. Our findings further highlight the potential of serious games in teaching skills needed to address anger feelings and provide support for its use in child and adolescent mental health interventions.

Steinemann, S.T., Opwis, K. & Mekler, E.D. (2016). The winner gives it all? Preliminary results on the role of game outcome on the effectiveness of a game for change. *Proceedings of the 3rd Annual ACM SIGCHI Conference on Computer-Human Interaction in Play (CHI PLAY 2016, Austin, Texas, USA, 16.–19. October 2016)*, 291-298. <sup>13</sup>

To date the impact of game outcome on prosocial behavior and attitude change has gone unexamined. Especially in the context of games trying to increase prosocial behavior and attitude change, understanding this connection may hold great potential. Therefore, the goal of this work-in-progress is to lay out the theoretical background to understanding this question, to present preliminary results from a pilot study, to describe their implications, and to outline further research to come.

Tondello, F.F., Kappen, D.L., Mekler, E.D., Ganaba, M. & Nacke, L.E. (2016). Heuristic evaluation for gameful design. *Proceedings of the 3rd Annual ACM SIGCHI Conference on Computer-Human Interaction in Play (CHI PLAY 2016, Austin, Texas, USA, 16.–19. October 2016)*, 315-323. <sup>14</sup>

Despite the emergence of many gameful design methods in the literature, there is a lack of evaluation methods specific to gameful design. To address this gap, we present a new set of guidelines for heuristic evaluation of gameful design in interactive systems. First, we review several gameful design methods to identify the dimensions of motivational affordances most often employed. Then, we present a set of 28 gamification heuristics aimed at enabling experts to rapidly evaluate a gameful system. The resulting heuristics are a new method to evaluate user experience in gameful interactive systems.

### **Weitere peer reviewed Zeitschriftenartikel und Beiträge in internationalen Conference Proceedings mit Peer-Review (nicht in der bibliometrischen Datenbank SCOPUS erfasst)**

Brühlmann, F., Schmid, G.-M. & Mekler, E. D. (2016). Online playtesting with crowdsourcing: Advantages and challenges. *34rd Annual ACM Conference on Human Factors in Computing Systems (CHI 2016 Workshop on Lightweight Games User Research for Indies and Non-Profit Organization, San Jose, California, USA, 7. –12. Mai 2016)*.

Martinis, F. C. & Mekler, E. D. (2016). Quick and easy evaluation for Indie- and Non-Profit games: A case study. *34rd Annual ACM Conference on Human Factors in Computing Systems (CHI 2016 Workshop on Lightweight Games User Research for Indies and Non-Profit Organization, San Jose, California, USA, 7. –12. Mai 2016)*.

Schmid, G.-M., Tuch, A. N., Papetti, S. & Opwis, K. (2016). Three facets for the evaluation of musical instruments from the perspective of the musician. *34rd Annual ACM Conference on Human Factors in Computing Systems (CHI 2016 Workshop on Music and HCI, San Jose, California, USA, 7. –12. Mai 2016)*.

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<sup>13</sup> Keine Angaben vorhanden // Keine Angaben vorhanden.

<sup>14</sup> Keine Angaben vorhanden // Keine Angaben vorhanden.

Steinemann, S. T. & Mekler, E. D. (2016). Beyond usability: Challenges and opportunities for academics creating games for serious experiences. *34rd Annual ACM Conference on Human Factors in Computing Systems (CHI 2016 Workshop on Lightweight Games User Research for Indies and Non-Profit Organization*, San Jose, California, USA, 7. –12. Mai 2016).

Schmid, G.-M., Tuch, A.N. Papetti, S. & Opwis, K. (2016). Evaluating the experiential quality of musical instruments: A psychometric approach. *16th biannual NIME (New Interfaces for Musical Expression*, Brisbane, Australia, 11. –15. July 2016).

## **Qualifikationsarbeiten (Abschluss in 2016)**

### **Dissertationen**

Mekler, Elisa D. (2016). *The motivational potential of digital games and gamification: The relation between game elements, experience and behavior change*. (Gutachter K. O., Datum der Disputation: 14. Januar 2016).

### **Masterarbeiten**

Forde, Seamus (2016). *Informational but not intrinsically motivating gamification*.

Gonzalez, Yanira (2016). *Action or goal mode? The role of mode of use, needs and product perception in understanding user experiences with smartphones*.

Jenny, Mathias (2016). *Aesthetics and performance: Are users more efficient with beautiful websites?*

Krauss, Luisa (2016). *Art in context: Impact of contextualizing information on aesthetic experience*.

Merz, Benedikt (2016). *Perceived user experience of animated transitions in mobile user interfaces*.

Müller, Livia Joanna (2016). *Enjoyment versus growing: Hedonic enjoyment and personal expressiveness in positive user experience*.

Ott, Celine (2016). *Art in context: Impact of contextualizing information on aesthetic experience*.

Savona, Sara (2016). *The effect of joint evaluation on omission bias in high-conflict moral dilemmas*.

Schellenberg, Marcel (2016). *The influence of product presentation on willpower*.

Weidmann, Melanie (2016). *Optimism bias and the influence of ego depletion*.

## **Bachelorarbeiten**

Aeschbach, Samuel (2016). *Perception of electric vehicles examined by user experience and marketing concepts.*

Hagemann, Ingrid (2016). *How the brain reacts to music and the effects of music therapy on Parkinsonian gait.*

Römelin, Sabrina (2016). *Mobile technology in classrooms: Can iPads further young children's learning development and successfully be integrated in the modern curriculum?*

Schächinger Tenes, Leila Teresa (2016). *Cognitive-behavioral differences between dyslexic and normal bilingual readers.*

## **Masterstudierende (per 31. Dezember 2016)**

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## **Doktorandinnen und Doktoranden (per 31. Dezember 2016)**

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