USER EXPERIENCE JOURNEYS

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Abstract

The emergence of positive User Experience (UX) is gaining in importance for convincing and satisfying customers with technical products. But User Experience Design brings along new characteristics that have to be considered – making the assessment of products more difficult. Hence, designers have to anticipate complex user product interactions and subjective user judgements. In industrial practice of product development the overwhelming complexity of influencing UX factors often leads to focus on single traditional aspects like usability – disregarding the holistic picture, especially temporal aspects, and making it difficult to analyze and consistently develop an intended UX. Therefore, we developed User Experience Journeys – aiming at comprehensive analysis and communication of UX in product development processes. This paper defines the matrix structure of UX Journeys – dissecting the interaction into relevant development information. Furthermore, we present an analysis process that accompanies the journey – identifying and analyzing the emotional experience curve. This methodology is based on theoretical findings about psychology and UX and applicable for industrial practice.

Keywords: Experience design, Emotional design, Design methods, User experience analysis

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1   INTRODUCTION

Motivation. User Experience (UX) summarizes how a user expects, perceives and assesses an encounter with a product (Roto et al., 2011). The emergence of positive User Experience is gaining in importance for convincing and satisfying customers with technical products. But User Experience Design brings along new characteristics that have to be considered: UX goes beyond usability, focuses on the interaction of user, product and context, includes emotional aspects and especially considers time periods before, during and after the actual interaction (Kremer and Lindemann, 2015).

Initial Situation. When the experience is more important than the product itself, the assessment of the product becomes more difficult. Instead of just evaluating a product once according to traditional performance properties, intensive and complex user product interactions shape subjective judgements by the user. But how can designers anticipate these complex and subjective user experiences and comprehend why one product is convincing the user while another one fails to do so? Existing UX approaches range from the emergence of emotions to the fulfillment of psychological needs but lack of incorporating comprehensive and temporal aspects. Hence, in industrial practice of product development the overwhelming complexity of influencing UX factors often leads to focus on single traditional aspects like usability - disregarding the holistic picture and making it difficult to communicate and consistently develop an intended User Experience.

Goal. Although UX is not completely plannable beforehand, we aim at understanding, communicating, analyzing and designing UX in product development processes. Based on the approach of customer journey mapping often used in marketing we aim at analyzing the journey users go through when interacting with a technical product - dissecting the UX into consecutive touch points and each touch point into relevant UX aspects. Section 2 summarizes relevant state of the art in the field of UX analysis and deduces our approach. Then we present our main results: Firstly, we developed a systematic structure for User Experience Journeys to include the various influencing factors (section 3). Secondly, we provide an application methodology for analyzing UX (section 4). Section 5 highlights opportunities and benefits of applying User Experience Journeys.

2   BACKGROUND - ANALYSIS OF USER EXPERIENCE

UX evaluation methods embrace a multitude of approaches, focusing either on data acquisition or on data analysis, and being either qualitative or quantitative. **Qualitative methods** are closely related to social research. Examples are think-aloud method, interviews, questionnaires, laddering or contextual inquiry. **Quantitative methods** are often based on semantic differentials and mostly focus on either analyzing psychological needs or emotions of users. Attrakdiff focuses on the needs perspective as fundamental understanding of UX. It is a questionnaire that uses pairs of adjectives. To analyze a product, probands evaluate these semantic differentials stating which adjectives are most appropriate to describe the product's character (Hassenzahl et al., 2003). In contrast, the tool PrEmo represents the analysis of UX via emotions. Probands can choose from a selection of expressive cartoons to show their own emotional response to a product. PrEmo uses the ability of humans to capture the emotional state of others precisely by gesture and facial expressions (Desmet, 2003). Besides, psychophysiological techniques use body functions to quantitatively measure underlying emotions of users, e.g. by eye-tracking (Mandryk et al., 2006; Law, 2011).

The **UX Framework** by Kremer and Lindemann (2015) joins the emotional as well as the needs perspective on UX to enable a holistic evaluation of products' UX potential. It considers the interacting factors user, product and context and specifies UX within three categories, *visceral*, *behavioral* and *reflective* as proposed by Norman (2005). The *visceral* category describes the contribution of the user's sensual perception of a product to the resulting experience. The subordinate UX elements of this category are all human senses. The *behavioral* category contains elements describing the way how user and product interact, e.g. concerning functions and usability. While the visceral and behavioral categories are only relevant during actual usage, the *reflective* category also incorporates phases before and after product use. It describes the conscious evaluation of experiences that is represented by elements like expectations resulting from the past or the expression of the own personality projected into the future. By summing up the assessments of all framework subcategories it is possible to evaluate the overall UX of a product (Kremer and Lindemann, 2015).

The presented approaches include data acquisition and analysis but disregard the consecutive representation and communication inside and outside development teams. The **customer journey** approach is used to communicate customer emotions and, in addition, incorporates the temporal dimension (Howard, 2014; Nenonen et al., 2008). Commonly, customer journeys are used in the field of marketing (Holland, 2014). The basic idea is to display the experience with a product, a service or a brand to make subsequent design improvements. Typically customer journeys are developed in teams and represent the touch points of user and product or customer and brand in a visual way. Although they are a commonly used design tool, there is neither an agreed structure pattern for the most appropriate visualization of information, nor a systematic and research based analysis methodology to generate a journey specialized on User Experience.

In order to connect UX analysis in terms of data acquisition, documentation and subsequent evaluation, we chose the journey approach and intertwined it with the UX Framework to ensure the consideration of all UX facets - using a combination of qualitative and quantitative information. By means of this, we achieve a visualization of the UX with a well-documented and reproducible formation process. At the same time this opens the opportunity to have analysis and communication of UX closely connected. We developed and applied our approach in the context of a research project with a home appliance manufacturer and evaluated and enhanced the approach in two additional research projects - designing a car interior and developing a product service system (more specifically a public e-bike sharing system).

3   USER EXPERIENCE JOURNEY - STRUCTURE

The **User Experience Journey** is a tool to identify UX potentials of products. Therefore, it represents the emotional experience of users graphically as a curve and enriches it with useful information to provide a detailed idea of the users' concerns. Figure 1 provides an overall impression of the UX Journey. It is arranged in a matrix like structure. The following explanations aim for an understanding of the journey structure on a global scale - highlighted with examples from our bike sharing use case.
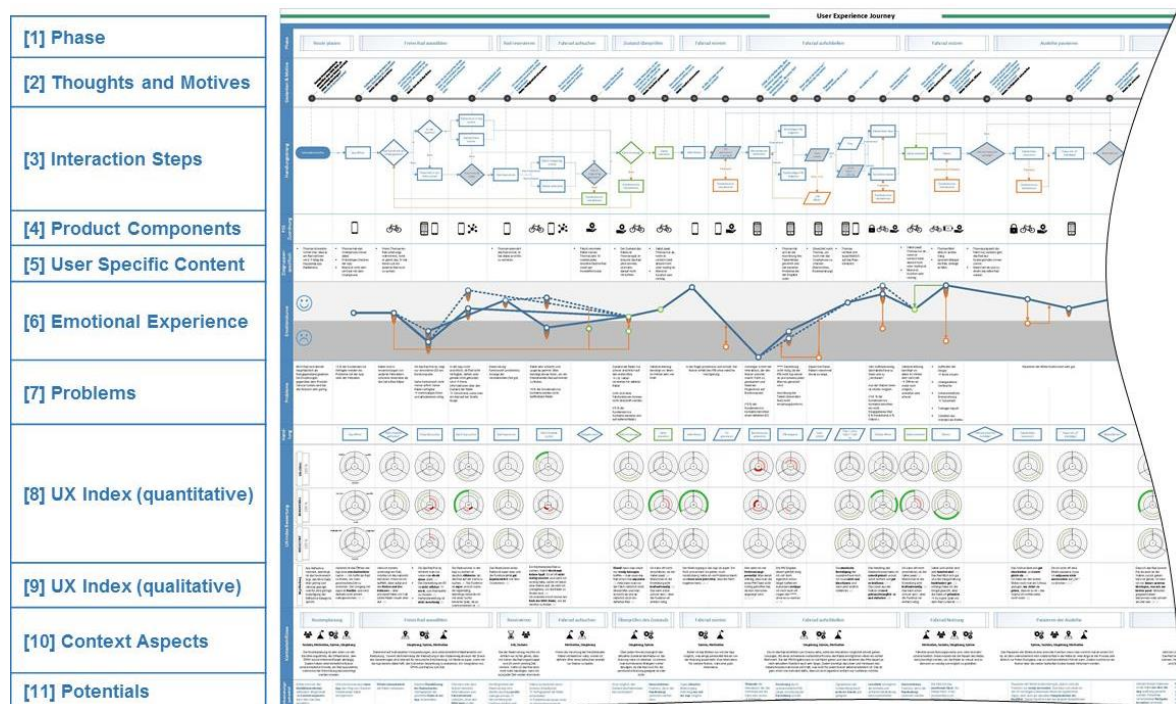

Figure 1. User Experience Journey

The UX Journey structure represents the ongoing interaction in horizontal direction - as a sequence of touch points of user and product. These touch points represent typical situations of the interaction. In vertical direction each column shows detailed information about a single touch point, adding data of certain categories in every row. Centrally located, the curve of the emotional experience consists of quantified snapshots of the emotional state at the touch points. At the top of the document row **[1]** represents the phases of the interaction. In the example of the bike sharing system the interaction starts with "Plan trip", "Choose available bike" and "Reserve bike". User thoughts and motives are a helpful

means to differentiate the single phases and lead to an improved overview. Therefore, row **[2]** contains thoughts and feelings that typically occur at the given touch point (e.g. "Where to begin the trip? Which bike should I use?"). It is followed by row **[3]**: a schematic representation of the interaction, including alternative courses of action (blue) and loops (orange). The graphic differentiates actions of the user (rectangles; e.g. look for an available bike in the mobile app), actions of the system (parallelograms; e.g. checking data) as well as decisions to make (rhombuses; e.g. requested bike located?). While row **[2]** gives a first impression of the users' point of view at a specific interaction step, row **[4]** highlights relevant product service components for each touch point (e.g. mechanical components, the bicycle interface or the mobile app). Row **[5]** shows need cluster specific actions if there is a decisive difference or extension to the general users' actions for the observed touch point (e.g. persona in focus rather looking for an available bike on the street or in the app).

As main result, row **[6]** is located centrally in the UX Journey. The curve displays the users' emotional experience according to the quantified determination of the UX index for every touch point (see section 4.3). The line chart evolves from left hand to right hand side - connecting and representing UX scores for the touch points. In some cases the chart also represents the effect of loops or obstacles. In this case the curve splits into one part that reveals normal interaction (blue) and one indicating the influence of the loops or obstacles (orange). Row **[7]** reveals problems or inconvenient moments that impede or delay the interaction of the interaction and therefore gives a first impression of reasons behind the emotional experience evaluations. For detailed explanations behind the emotional curve, row **[8]** shows the evaluation of the UX categories visceral, behavioral and reflective and according sub categories at each touch point. In order to allow meaningful improvements when using the UX Journey, row **[9]** documents qualitative explanations for the quantitative UX indices. Row **[10]** concludes characteristic assessments for each usage phase and sets them in a broader motivational, social, system related and environmental interaction context (E.g. for the phase "Choose available bike" the intention of the user when renting a bike and the combination with other transport facilities is relevant for the User Experience.). Finally, row **[11]** highlights potentials for improving the UX at each touch point. Coming out of the detailed UX evaluation these potentials can be starting points for generating solutions in innovation management and product development. Not shown in Figure 1, an executive summary and an explanation of the used symbols complete the journey at the bottom edge of the document.

The UX Journey shows the current state of emotional experience, resulting from user product interaction of a certain target group. It aims at solving the dilemma between complex influencing factors on UX on the one hand and the need for comprehensible communication of relevant information in product management and development on the other hand. On a global scale, the journey visualizes the UX in an easy understandable experience curve that can bring together different disciplines and departments. At the same time, the profound document can help to analyze the experience curve in detail. In general, the composition of the UX Journey requires resources: time, people involved, and data about the product, the users and the context. Also the document itself can become very big. In our case we needed an A0 format to accommodate all information. In the stage of structuring the UX Journey, the amount of touch points has to be determined carefully. The decision has crucial influence on the effort for and quality of the analysis.

4   USER EXPERIENCE JOURNEY - ANALYSIS PROCESS

This section shows a concise overview of the workflow we suggest to document and evaluate UX with the help of a UX Journey. It explains the most important steps of the analysis by pointing out the underlying principles.

4.1 Preparatory definition of objective and scope

Before the actual analysis can start, it is crucial to choose the objective of the investigation. Distinction between several possible customers or user groups as well as the decision for the scale of the examination decide about the potential insights to gain with the presented approach.

Setting goal of analysis. The intended goal of the analysis influences the product and the customer or user group to be considered. E.g. it can be the group of the majority of present customers, a group that should be addressed in the future in order to gain new market shares or an intended marketing persona.

Setting focus of analysis. Subsequently the intended focus of the analysis has to be defined. It can either be a broader consumer journey e.g. taking into account also phases before the product purchase, or the

UX journey centered on the user product interaction. The customer journey tends to serve in sales and marketing, while the UX journey generates more insights about the actual interaction with the product, and is used in product development. In the following we focus on the UX journey.

4.2 Design of analysis documents

Capturing the interplay of several influencing factors creates a holistic picture of UX. It embraces the three main factors *user*, *product* and *context*. This section outlines how to include them in the analysis as well as how to specify the structure of the UX Journey depending on a particular use case.

Generation of customer profiles. Customer profiles serve as method to characterize and distinguish between identified user groups. We sorted the information by the following categories for the analysis of a dishwasher: environment of product usage, personal data, product utilization, social behavior and emotional behavior. Michailidou et al. (2016) developed one pager that accommodate the presented categories and can serve as templates for the customer profiles.

Generation of context profile. Additionally to the analysis of the users or customers, we identified the following facets of the context as most decisive: *social* (Hassenzahl and Tractinsky, 2006), temporal (Krippendorf and Butter, 2008), *motivational* (Crilly et al., 2004), *physical* (Roto et al., 2011) and *system related* (von Saucken and Gomez, 2014). Other contextual facets can all be assigned to the established categories. Aspects within the facets of context need to be adjusted to the analyzed product. We developed one pager similar to the customer profiles as complementing analysis document.

Definition of UX Journey structure. Before the determination of the emotional experience, it is important to define the structure of the journey - having impact on the size and complexity of the analysis. This includes the definition of the system boundary. For optimal results of the presented analysis, a reasonable choice of the interaction's beginning and ending is crucial as these phases have great influence on the overall evaluation of experiences by the user (see 4.4). But not only beginning and end of the interaction, also the level of detail between these two points impacts scope and quality of the analysis. As well, the development team has to select the characteristics to be represented in vertical direction of the UX Journey - deselecting irrelevant information for each project or adding additional rows (e.g. psychological needs connected to certain interaction steps or responsibilities for various interaction phases in the design team). After having defined the journey structure the design team can start with iteratively filling the document with analysis information.

4.3 Determination of the emotional experience curve

The emotional experience curve bases on the aggregated UX assessments of the touch points. In order to make meaningful assessments our approach contains the following steps.

Definition of meaning of UX categories. The UX categories by Kremer and Lindemann (2015) define the framework for factors that influence the User Experience. For allowing meaningful UX evaluation, the design team has to discuss the meaning of each category for the product in focus. (e.g.: Does usability mean high automation and as few user actions as possible? Or is it crucial to integrate the user into the interaction extensively and to give him a feeling of permanent control?) Furthermore, the visceral category should contain only relevant sensual perceptions specifically defined for the analyzed product. In case of technical products the most common visceral UX elements are visual appearance, touch experience and sound experience, but also taste and smell might play a role.

Determination of the product cluster. Product clusters help to capture how products differ in what is perceived essential for a good experience. While e.g. UX with a bicycle lock might be judged mainly by usability aspects, other products like sports cars obviously fascinate with other emotional characteristics however the usability (e.g. in terms of comfort) is in general worse than for an average car. We use clusters, in order to clarify the importance of the UX categories for a specific product. Our classification of a product into a specific cluster is only valid for a certain user group and a specific context. By this means the analysis of UX is more purposeful and products can be designed more appropriately.

A possible criterion to differentiate the product clusters is the "Involvement". The Involvement Theory is widespread in the field of marketing and can be determined on a single scale of "High-" and "Low-Involvement" indicating the depth of examination with the product. Also it is common to distinguish two scales: one showing the dimension of High- and Low-Involvement and the other showing the quality of Involvement, distinguishing between "Think" and "Feel" products (Vaughn, 1986) or the similar construct of "Rational" and "Emotional Involvment" (Zaichkowsky, 1987).

We oriented our differentiation of product clusters on these two scales. But to determine the type of involvement, we changed the criteria in comparison to the ones proposed by Vaughn (1986) slightly in order to enlarge the view not only on buying but also on using the product as well as to avoid misunderstandings and dependencies of the scales. For High-Low-Involvement we propose the criteria: (A) high risks (including financial risks), (B) big differences between alternatives and (C) intensity of mental examination with the product during usage. For the distinction between Rational and Emotional Involvement we defined: (A) decision is/is not mainly logical or objective, (B) decision is/is not based mainly on functional facts, (C) product is/is not exciting, (D) decision does/does not express one's personality and (E) decision is/is not based on looks, taste, touch, smell or sound.

Evaluating the shown criteria on a scale from 1 to 5 determines the product's position in the product cluster diagram in Figure 2. Each orange box represents one product cluster. The position of each cluster supports defining the weight of all UX categories by Kremer and Lindemann (2015) for the overall experience. The right side of Figure 2 explains the UX categories and their relative weight within a product cluster. In our analysis we used weighting factors from 75 to 125 percent, as no UX category should be neglected completely (Norman, 2013). We determined the dependencies of relative weight and product cluster by researching theory about the UX categories and the reversal theory about motivational states. Firstly, Figure 2 visualizes that the higher the involvement is, the more important the reflective category tends to be. The reflective category represents the conscious evaluation of a product that also takes place before and after actual usage. This characteristic fits the construct of High Involvement most, as it is related to risks and therefore increases the probability of deep occupation. Furthermore, we assume higher importance of the elements Functions and Usability for Rational Involvement on the left side of the diagram. This is due to the reversal theory which describes a telic and a paratelic state of motivation (Apter, 1989). The telic state is characterized by aiming for concrete objectives and the paratelic state by the search for enjoyment. Knowing these motivational states, rational products might be dominated by the telic state. On the other hand, we assume more relevance of the visceral characteristics as well as the elements "Fun and Gaming Experience" in the case of Emotional Involvement, situated on the right side of the diagram.
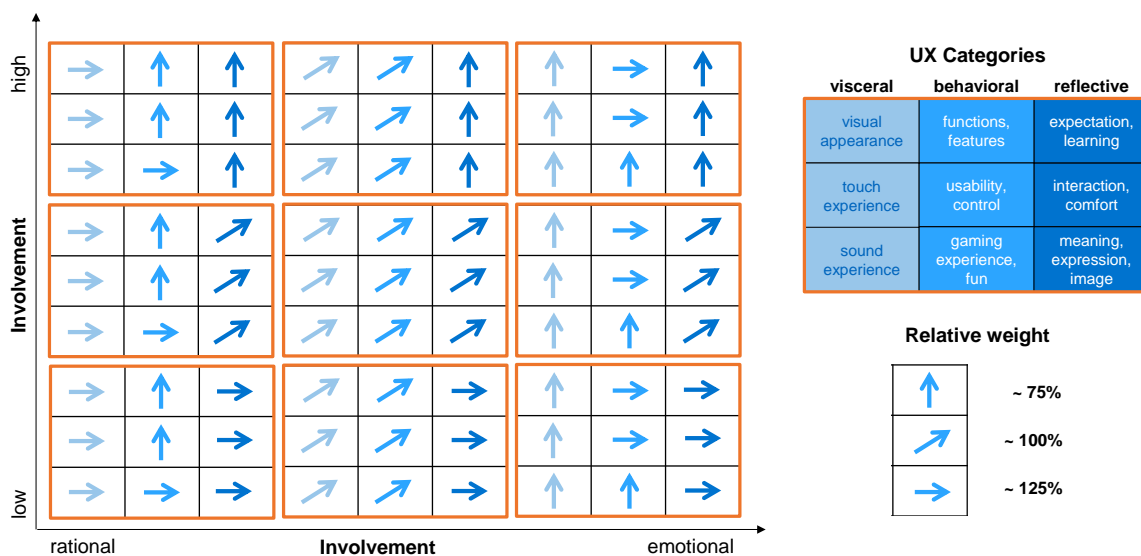

Figure 2. Product clusters and relative weights of UX categories

However, the assignment of products to a certain set of relative weights of the UX categories needs to be discussed in each specific case. Besides the derivation of relative weights from the product clusters, another approach could be shifting a product purposefully into other areas of the diagram in order to address new target groups. For example the product design could specifically target higher Emotional Involvement by including elements that address the expression of one's personality.

Collection of data. When evaluating every touch point of the UX Journey, data can be acquired by means of interviews with users - assessing the UX elements on a defined scale. A basic set of predefined questions for each element simplifies the understanding of the UX categories. For the visceral and behavioral categories the questions target a comparison to similar products - taking in account the adjectives new, special, exciting and surprising. In the reflective category the questions target

psychological needs like autonomy, competence and relatedness according to Kim et al. (2011). In case of interviews the effort for evaluating every UX element at every touch point must be considered. Also the interviews generate improved results, when carried out in the presence of the analyzed product for realistic and direct impressions. Other possible input data in this stage can be user observations, existing data on product usage, product documentations, information from product experts or discussions in the design team.

Calculation of UX indices. The assessments by users and other input data enable the determination of UX indices for every touch point (see Figure 3). We established a scale with seven possible ratings, indicating feelings from frustration to excitement with progressive scores. The progressivity seems suitable, as intense feelings have increased influence on the overall impression. However, we observed that test persons tend to avoid ratings of the strongest categories. All UX scores for one UX category are summed up in each calculation disc and multiplied with the weighting factor for the category (see section "product cluster"). Summing up all calculation discs of a single touch point produces the UX index for this touch point which again contributes to visualizing the users' emotional journey during product usage. Yet, it is crucial to document the explanations behind the UX indices as well.

Evaluation of User Experience Index: Sum of all UX-Elements
Frustration (-9, red), Dissatisfaction (-3, light red), Rather satisfied (-1, grey), Neutral (0), Rather satisfied (+1, grey), Satisfaction (+3, light green), Excitement, Joy (+9, green)

Figure 3. Emotional experience curve and UX index calculation discs

Contextual summary. A summary of most important aspects from users' perspective recaps findings and the meaning of the actual usage context for the UX. It is an indispensable supplement, as only qualitative information behind the quantitative evaluation makes the analysis meaningful.

4.4 Analysis of User Experience Potential

The analysis of UX potential establishes a reference for subsequent UX improvements. The question is how to interpret the emotional experience curve of the status quo. Already the **intensive examination** of the actual experience, including the whole described analysis process from preparation over data acquisition to evaluation of the status quo, leads to an understanding of the UX and to a natural generation of improvement ideas. A starting point for the analysis can be traditional **problem solving** - analyzing extreme negative assessments from user's point of view in overall experience or specific UX categories marked in red in the UX index discs. Beyond this, **UX indices** of single steps can be starting point for optimization (e.g. by comparing the actual UX with intended benefit of existing technology and corporate competences): relieving users by eliminating negative evaluation aspects, surprising users in so far neutral interaction steps or impressing by enhancing relevant and already positive UX elements. Furthermore, the analysis of the **line of action** provides evidence for improvements. For example it reveals barriers or loops in the interaction, the rate of user actions to product actions and the number of decisions to make.

As UX evaluation should go beyond traditional problem solving, **psychological theories** about human perception as well as theories about the **UX categories** establish a reliable basis to analyze the emotional experience curve. The following paragraphs show theories in the mentioned fields and explain their additional benefit for the analysis of UX potential.

Psychological theories about human perception. To reasonably analyze the emotional experience curve, we researched psychological theories about human perception and the resulting evaluation of experiences. Table 1 shows relevant theories and the related findings as well as results for the assessment of the emotional experience curve. The findings can be transformed into a target curve for the emotional experience. Comparing the actual experience curve of the UX Journey with the target curve shows, in which touch points enhancements are most necessary or promising. E.g. if the beginning of the interaction shows low UX potential or if there is a steep incline at certain point in curve, this is an important aspect to be improved as it is crucial for overall evaluation by the user.

Table 1. Theories about human perception

Name of Theory	Content	Findings and Results
Peak-End-Evaluation	Experiences are assessed to a large extend by the strongest emotions and the emotions in the end.	Experiences with products can be assessed regarding mainly strongly positive/negative emotions and emotions in the end of the interaction. → Last impression and strongest impression need to be positive.
Duration Neglect	Less emotional phases are less represented in the assessment disregarding their length.	Less emotional phases in the product interaction have little impact on overall assessment disregarding their length. → Slightly negative experiences can be accepted in the experience curve disregarding their length.
Primacy Effect (cf. Halo Effect)	Information that is available earlier is remembered stronger than information that is available later.	Product properties perceived in the beginning are remembered stronger. → The first impression has crucial influence and needs to be positive.
Recency Effect	More current information is remembered stronger than information that was perceived longer ago.	Product properties perceived more currently are remembered stronger. → The last impression has crucial influence and needs to be positive.
Adaption Level Theory (cf. Contrast Effect)	Perceived stimuli are evaluated with regard to the current customs, the Adaption Level. The bigger the deviation of the Adaption Level, the more intense the perceptions are.	Positive/negative experiences with products lead to less intense perception of experiences that are objectively similar positive/negative. → Big steps upwards in the emotional curve are favorable, big steps downwards are unfavorable.

Theories about UX categories. Based on the general weight of UX categories (see 4.3), it is possible to come to a strategic decision: Focus on the current important UX categories or shifting the product to a towards a new product cluster. Beyond this, we also examined the specific relevance of the categories in the phases of interaction.
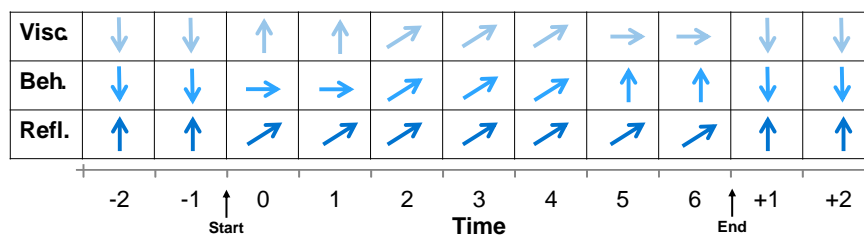

Figure 4. Relevance of UX categories in the phases of interaction

Figure 4 visualizes the findings. Arrows indicate the importance of each category over time. The periods before and after usage are marked by a minus (-) or plus (+) on the time axis. Visceral impressions are crucial for judgments that are made very fast (Norman, 2005). The category represents the aesthetic aspect of products that is very important for the first impression (Lindgaard et al., 2006) and decreasing over time. The behavioral category contributes to the experience during direct interaction with the product. Increasing over time, it is highly important in the end of the interaction as frustration must be prevented (Norman, 2013). The reflective category always has a high influence on the experience and on the evaluation of a product, especially in phases when the product is not used (Norman, 2013). The combination of findings from psychological theories and UX categories leads to an emotional target curve. This allows comparison with the actual experience. An example could be a declining evaluation of the behavioral category during continuous usage in contrast to the importance of this aspect at the end of an interaction.

4.5 Generation and Integration of new User Experience Potential

Having a detailed analysis of the actual experience with the product, ideas for the improvement of UX can be derived. Finally, a concluding step for assessment of the ideas provides a final classification and helps with subsequent decisions.

Generation of ideas. Parallel and subsequent to the UX analysis the design team generates ideas how to address the potentials with product solutions. We suggest to weight single potentials and to cluster them to overarching experience goals. In the next step product development can focus on fulfilling these goals (e.g. with the help of the ExodUX model for UX concept design by Kremer et al. (2015)).

Assessment and integration of ideas. As a concluding step, an iteration of the UX Journey is reasonable. The advanced UX Journey contains all newly generated UX improvements at the assigned touch points. A comparison of the initial UX Journey and the iterated version shows the influence of potential changes.

5 ADDED VALUE AND POSSIBLE APPLICATIONS

In the following, we highlight novel characteristics and benefits of User Experience Journeys presented in this paper compared to the existing approach of consumer journeys:

- We tailored UX journeys for supporting product development and hence focusing on user product interaction instead of a traditional marketing and sales perspective.
- The journeys explicitly address UX aspects (see Kremer and Lindemann, 2015): integrating holistic UX influences; application of user profiles, explicit context integration and analysis of interaction in between; representing user specific emotional value; paying attention to temporal aspects instead of focusing on a single product evaluation.
- Rather than a highly vague estimation of the emotional value throughout the journey our approach allows a systematic derivation of the emotional curve.
- We provide a profound structure for UX journeys and a methodology to create and analyze User Experience holistically and customizable according to project requirements.

In research projects with a home appliance manufacturer and a public transport provider as well as in further interviews with industrial UX consultants and User Experience experts we identified concrete demand for a holistic UX analysis tool. The industrial partners evaluated our UX journeys as highly relevant support for current User Experience work in industrial practice and named the following **possible applications:**

- Assessing experiences is more difficult than assessing a product. Hence, UX is often disregarded in industrial practice - also due to traditional project and company structures. In the first place, the journeys help understanding complex UX influencing factors and communicating UX content to members inside a project team and beyond (e.g. to management).
- The original goal of the UX journeys is the analysis of potentials in the status quo of user product interactions - highlighting weaknesses and unused possibilities from a UX point of view.
- According to the potentials, the journeys allow locating ideas and innovation projects and consecutively create a common experience goal.
- Finally, ideas and concepts can be assessed in comparison to the status quo.

6 CONCLUSION AND OUTLOOK

Designing positive User Experiences with products enables the creation of unique selling propositions. Interdisciplinary design teams need viable methods to deal with UX factors in design processes. But conventional design tools are not focused on incorporating comprehensive and temporal aspects. With the goal of breaking down the complexity of User Experiences we developed User Experience Journeys. These journeys should help understanding, communicating and analyzing product interactions and accordingly designing experiences for users. This paper defines the matrix structure of UX Journeys with two major benefits: emotional experience curve for a comprehensible big picture and detailed analysis information behind for holistically investigating UX. The second presented result is the analysis process that accompanies the journey: definition of the overarching goal, design of the analysis documents, determination of the emotional experience curve, analysis of the UX potential and generation as well as integration of new ideas.

Future work focuses on improving limitations of the present approach - evaluating the applicability in further projects and overcoming weaknesses based on additional theoretical findings. We want to improve usability by graphical representation or tailoring project specific content. As well, it is possible to use the UX Journey rather as a workshop tool that brings together the design team than just to use the final document. Furthermore, the application methodology offers aspects for further research: How to define the system boundary? How to use usage data to determine the emotional experience? How to identify and focus on most important touch points? How to systematically derive new UX potentials out of the journeys?

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