# GLOBAL NEWS OR ROMANTIC MOVIES: HOW CUSTOMER VALUES ARE KEY FOR THE ENTERTAINMENT EXPERIENCE

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## ABSTRACT

Recommending content that is tailored toward individual users can support the basic need for instant gratification. Recent developments concerning media and over-the-top services majorly address user needs. However, user needs are short-term oriented, which lacks the possibility to design systems and services to enhance long-term user experience, and support behavior change. Thus, considering long-term oriented user values can be a key element to overcome these challenges in the design of future media services. To initially investigate how users' values changed over the last 5 years, and thus impacted behavior concerning media consumption, we conducted a survey-based study (N=144). Key findings show a shift towards valuing social connections instead of driving for personal success and achievement. Due to this value shift, our insights outline that watching live broadcasts is not as important anymore as it was in the past. Instead, today's customers primarily seek personalized entertainment content with unlimited access which can be watched preferably on a big screen without any interruptions. In addition, our data highlights that media consumption and individual media behavior gets significantly impacted by customers' values. We conclude with a set of recommendations on how to improve the next generation of entertainment services.

## INTRODUCTION

Nowadays, personalized media content is available for the majority of over-the-top services and has even made its way to classical TV providers to enhance user experience. However, personalization is commonly based on data concerning (past) media consumption, occasionally including cross-referencing to other services that might include the usage of location data or data from users interacting in the smart home [8, 3]. In addition to personalization based on previously consumed media, considering users' values is a key component for the choice of media services which offers to enhance long-term user experience and customer loyalty.

Entertainment services are designed to keep the customer subscribed to their service as long as possible. The majority of these services are developed in a way that based on the past data on usage a recommendation is given for future usage [3]. In a variety of attempts, researchers tried to understand what variables to use additionally to improve the prediction accuracy of recommendations: contextual cues such as time, location, environment [14, 1], or the user's current emotion [5], and services were designed to support multi-users, e.g., by aggregating individual's recommender system features to produce recommendations for whole groups [10].

Contrary to using contextual variables, technological variables (like devices), or behavior, we argue that values can be a driver when it comes to the long-term adoption of products and technology, and thus values can be a key to extending current recommendation systems as well as entertainment services overall.

When addressing values a standard method in social science is to use self-reported data. This self-reported data of course is subjective and can be biased [15]. The goal of this work is not to achieve an objective measure, but to enhance the perceived experience of users, depending on how they see the world.

We demonstrate in this paper how users' self-reported value perception relates to media consumption and media behavior and outline how this can shape the next generation of entertainment services. Based on an online survey, we investigated users' current values and how they shifted over time in Austria, Germany, and Switzerland. Grounded on the data gathered, we outline inspirational ideas on how to best satisfy customers' personal values and support value shifts for the future design of media services.

## RELATED WORK: VALUES AND MEDIA CONSUMPTION

In general, values are defined as "concepts or beliefs about desirable end states or behaviors, that transcend specific situations, guide selection or evaluation of behavior and events, and are ordered by relative importance" [13]. But "values are also used to characterize cultural groups, societies, and individuals, to trace change over time, and to explain the motivational bases of attitudes and behavior" [11]. Thus, human values are goals that arise from different desires and situations and are also guiding principles in a person's life. Values implicitly define life directions that reflect the interests of a whole social community. Overall, values motivate and provide directions, as well as emotional intensity. They also act as judgments and justifications of actions and are acquired through both social groups and unique learning experiences [12]. In concrete terms, values respond to the needs "of individuals as biological organisms, requisites of coordinated social interaction and requirements for the smooth functioning and survival of groups" [12]. Thus, they are critical motivators of behaviors and attitudes [11].

The theory of basic human values from Schwartz et al. [11] reports four main value groups with two up to five values per group (see Figure 1):

- **Openness to Change:** people which are highly into openness to change strive for independence of thought and actions and are ready for changes [11].
- **Self-Enhancement:** people highly into self-enhancement emphasize the pursuit of one's own interests and strive for success and dominance over others [11].
- **Conservation:** people highly into conservation highly emphasize order, self-restriction, preservation of the past, and resistance to change [11].
- **Self-Transcendence:** people highly into self-transcendence emphasize concern for the welfare and interests of others [11].
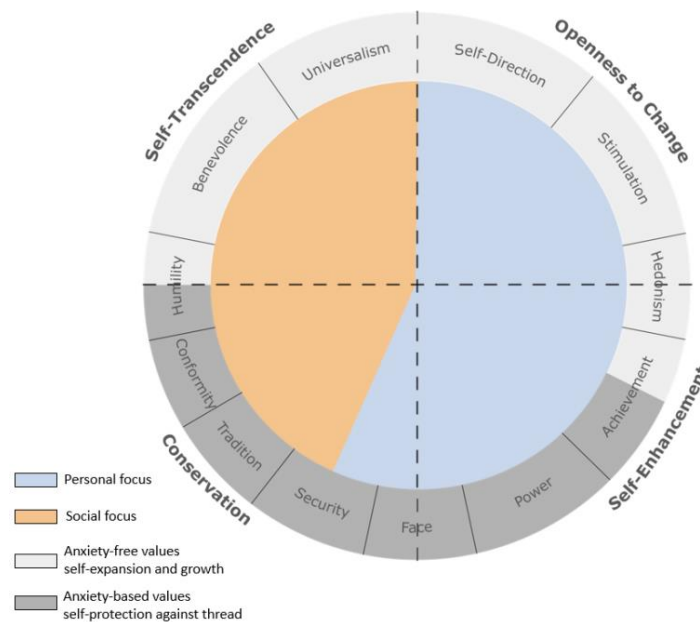


Figure 1 – The four different value groups (quadrants) and their underlying values (gray cycle) - adapted from [11]

| Value | Definition |
|---|---|
| *Self-direction* | Freedom to cultivate one's own ideas and abilities. Freedom to determine one's own actions |
| *Stimulation* | Excitement, novelty, and change |
| *Hedonism* | Pleasure and sensuous gratification |
| *Achievement* | Success according to social standards |
| *Power* | Power through exercising control over people and control of material and social resources |
| *Face* | Security and power through maintaining one's public image |
| *Security* | Safety in one's immediate environment and stability in the wider society |
| *Tradition* | Maintaining and preserving cultural, family, or religious traditions |
| *Conformity* | Compliance with rules, laws, and obligations. Avoidance of upsetting other people |

| Humility | Recognizing one's insignificance in the larger scheme of things |
|---|---|
| Benevolence | Being a reliable and trustworthy member of a group. Devotion to the welfare of group members. |
| Universalism | Commitment to equality, justice, and protection for all people. Preservation of the natural environment. Acceptance and understanding of those who are different from oneself |

Table 1 - Definition of the main values from the Schwartz values theory [11]

Overall, there are 12 values (for value group alignment see Figure 1, for the value definition see Table 1) that are unique to one another as they underlie different motivational factors and therefore represent different overall life goals. They are applicable to all humans, independent of their religion or culture.

Typically, values are assessed based on questionnaires, for example, the Short Schwartz Values Survey (SSVS) [7,9] consists of ten questions and identifies the alignment of a user with the above values.

The relationship between users' values and their impact on media consumption has not been studied extensively in the past. However, Allen et al. showed already two decades ago that customers' values impact what type of product people purchase [2]. A key to developing the next generation of entertainment services, when it comes to retention and customer loyalty, has not been investigated in the research areas of human-computer interaction and media entertainment in detail.

## RESEARCH PROBLEM AND METHOD CHOICE

To understand how we can design future media-based services and systems that best support long-term user experience and customer loyalty based on user values, the following research questions are central:

- How do values impact users' media behavior and consumption?
- How can we design future products that take the value changes and their effect on media behavior into consideration?

To investigate how values in general and possible shifts in values impact media behavior and consumption, we conducted a series of pre-studies investigating the importance of values when it comes to the design and development of technological products. These pre-studies combined a set of technology probes, surveys, focus groups, and prototypical implementation of concepts to improve recommendations [6]. It also supported the design and development process of entertainment services by providing persona and scenarios that include values as key criteria to inform requirements decisions [4]. To complement this work, we set up a web survey, investigating key values and media behavior sampling from a user group in middle Europe.

**WEB-BASED SURVEY TO UNDERSTAND MEDIA CONSUMPTION BASED ON USERS' VALUES**

The web survey ran in December 2021 on *SurveyMonkey*[1] and focused on the assessment of users' values, their value shifts over the past five years, and the accompanying changes, current preferences in their media behavior, and media consumption.

We used the Short Schwartz Values Survey (SSVS) [7] to assess participants' perceived values with ten validated questions, one question per value (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security). Participants were asked for each value to decide on a 9-point Likert scale if the value is of supreme importance for them (= 8) or opposed to their principle (= 0) [7, 9]. To determine a person's main value group, the average scores of the individual values questions per value group were processed according to [9]. For the media bahavior, we asked three questions based on a 7-point Likert scale (extremely important to not important at all) referring to five important media categories: audio (e.g., music streaming, radio, and podcast), video (traditional TV, video on demand, and video sharing platforms), news, social media (e.g., Facebook, Instagram), and digital communities (e.g., Reddit). To assess the values-shift over the past five years each participant answered the SSVS and entertainment-oriented questions twice. Since values are personal, psychological constructs that are not measurable through other means (e.g., technology or sensors), we had to rely on the self-reported SSVS. Besides that, the perception of individuals on their value changes impacts their behavior [2] and thus we argue, that participants' self-reported values five years ago enable us to investigate the mentioned research questions above. In addition, the survey also included demographic questions (age, gender, home country) and questions related to technological equipment owned and entertainment services used.

The survey was distributed in middle Europe and participants were recruited based on convenience sampling. We collected N=144 datasets from German-speaking households (Germany = 93, Austria = 39, Switzerland = 11, Other = 1). Participants' average age was 38.15 (SD = 7.42), ranging from 23 to 61 where 65 identified as women and 79 as men. Filling out the survey took on average 17 minutes. Overall, the survey included demographic questions (age, gender, home country) and questions related to entertainment services used. Overall, 103 out of 144 participants use free or cable TV, 94 video-on-demand services, and 106 indicated using social media.

**RESULTS**

**Value-Shift**

The majority of our participants are highly into *Self-Transcendence* and *Conservation*. This means that they strive more for being a reliable, trustworthy member of a group and taking care of others and/or the environment (*Self-Transcendence*), self-restriction, preservation of the past, and are more resistant to changes (*Conservation*) compared to seeking power,

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dominance, achievement (*Self-Enhancement*), freedom concerning ideas, abilities, and actions (*Openness to Change*).
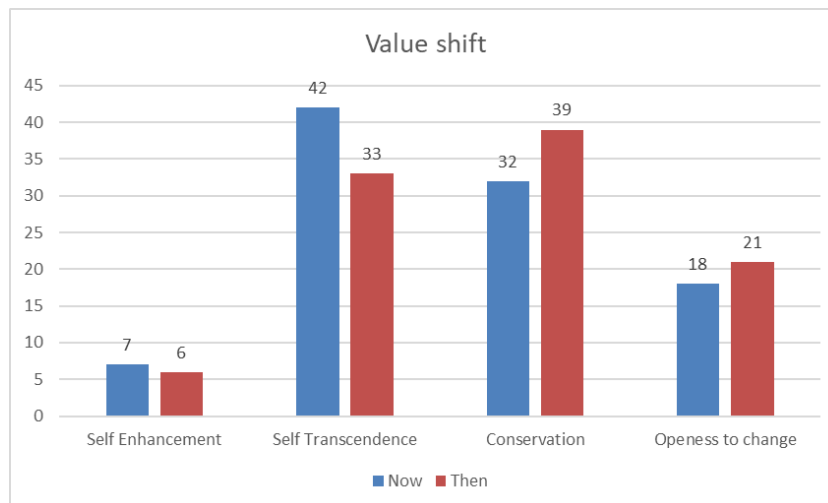


Diagram 1: Changes in the number of participants classified according to their most important value group

Comparing the value changes between now and 5 years ago - based on the four main value groups (see Diagram 1), we found that participants have a significantly higher *Self-Transcendence* nowadays ($Z = -3.25, p=.001$). A value shift regarding *Conservation* ($Z = -1.56, p=.119$), *Self-Enhancement* ($Z = -.311, p=.756$), and *Openness to Change* ($Z = -.188, p=.851$) was not observed.

## Media Consumption Change

With regard to media consumption and usage, our data outlines that having a big screen for watching media content ($Z = -2.108, p = 0.035$), having access to content at any time ($Z = -3.145, p = 0.002$), and watching videos without interruption (e.g., advertisements) ($Z = -3.159, p = 0.002$) is nowadays more important than it was 5 years ago. In addition, users strive significantly stronger for the content of their interests ($Z = -5.445, p < 0.001$), access to both local ($Z = -4.284, p < 0.001$) and global news ($Z = -2.865, p = 0.004$), and the possibility to listen to music at any time ($Z = -2.161, p = 0.031$). However, watching shows or content live on TV is nowadays less important than it was for users five years ago ($Z = 2.980, p = 0.003$).

Besides that, we observed dependencies of features and functions. For instance, when users use an online video library, they want to be able to select from a variety of different content ($r(142)=.710, p<.001$). Users also prefer a big screen in combination with different content ($r(142)=.717, p<.001$). In addition, when having access to a variety of content, users seek access at any time at any place ($r(142)=.718, p<.001$).

Apart from these changes, users report that accessing online libraries and being able to select from a variety of different content is still as important as it was in the past. This also holds for having access to social media to stay informed about other people and to connect with friends. In addition, it is important that media is relaxing, inspiring, fun, entertaining, and enables to gain knowledge.

**Media Consumption based on Values**

We then looked into the media consumption depending on users' main value group. Therefore, we investigated how important the assessed media characteristics are for certain value groups. In Figure 2, we outline the main characteristics for each value group ranging from highly important **(+++)** to not important at all **(---)**. We *report* in the following *only statistically significant differences* between value groups.

Survey participants self-reporting self-transcendence as their most important value showed a higher interest in sustainability-oriented offers and products and would be interested in entertainment services supporting their behaviors and choices to support sustainable lifestyles. Their main interest lies in global news, and they perceive digital community platforms (e.g. Facebook, etc.) as one of the services they would not value long-term. 42.4% of the participants indicated to have self-transcendence as the most important category.

Openness to change is a key value for 18.2% of the participants. They are eager to have access to content at all times, want to select from a broad variety of content, value services where content fits their interest (to be entertained, to receive news as key categories), and in general prefer advertisement-free services. They are the group that is into binge-watching the most and are active on social media to get informed.

Global news is least important to participants that self-reported conservation as their central value (32.3%). This group has only one key indicator when it comes to media entertainment: price. They are the least likely to spend money, to accept ideas on how to support a more sustainable lifestyle and their local environment and surroundings are key for the media entertainment-related choices.

With only 7.1% of participants who identify with self-enhancement as a key value for life, this is the smallest group in terms of representation in the overall survey sample. This group values life-TV, and short movies, and not surprisingly wants to use community platforms.
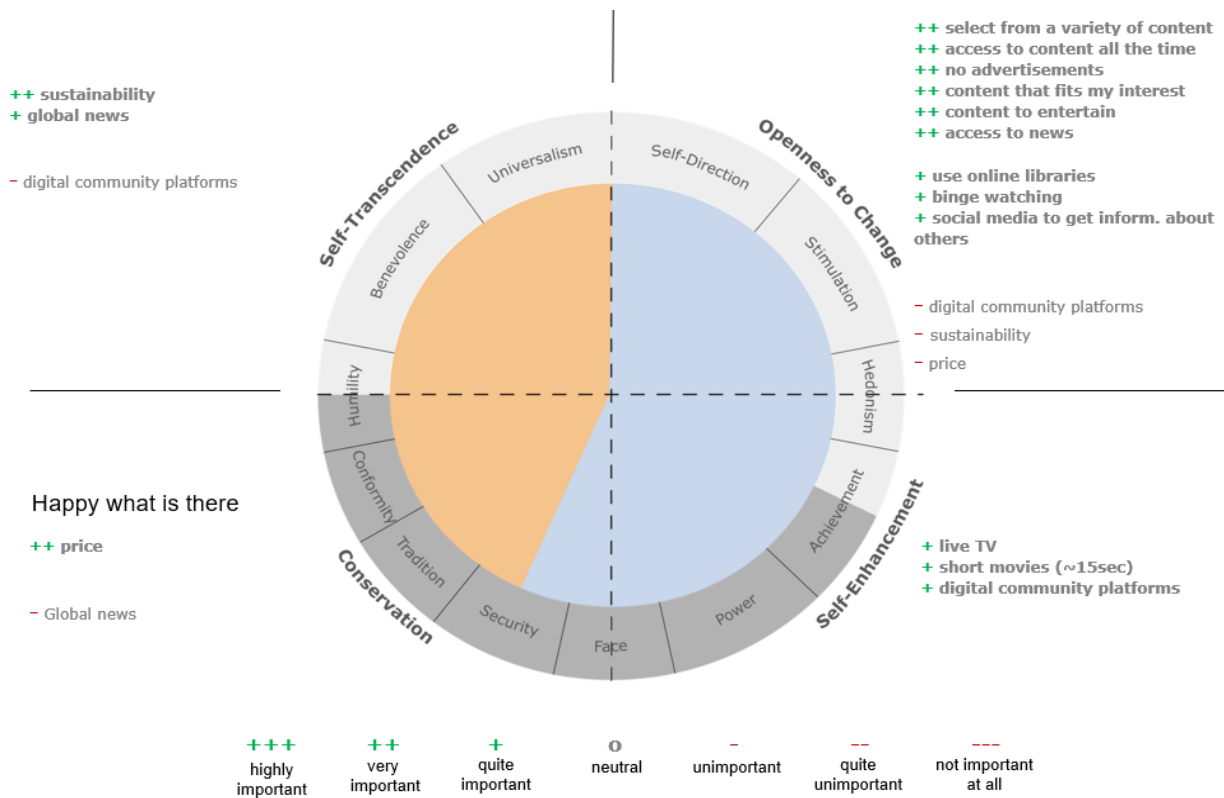
Figure 2 – Importance of media characteristics depending on users' main value group

## DISCUSSION: DESIGN DIRECTIONS TO SUPPORT VALUES

When it comes to the next generation of entertainment services, we see values as a key factor to be taken into account in the design and development of services as well as recommendation engines. Given a choice, we would argue for integrating self-reported values as a central factor in recommendation engines, especially to solve longer-term reliability of algorithms. In terms of technology, the exploration should go towards a connection of prediction with values, rather than only behaviors (content watched). We are currently exploring here a two-layer approach, to add on existing recommendations a second layer that would address value and value change.

Beyond recommendations, the reported value groups can be also used to segment customers to provide them with more tailored services overall. Sustainability will be a key focus, and how to motivate other user groups to accept more sustainable behaviors. For entertainment services, a key question will be how to support conflicting concepts that are non-conclusive. It will be easy (but maybe expensive) to serve the group of self-enhancement with access to community platforms and having a large number of other customers not using it, it will be more difficult to combine customers' interest in more content with the conservation group that is only focusing on price. Our current research approach here is to focus on user experience-oriented service design that splits customers into these four groups, to better design for the next generation of entertainment services.

Even though values are independent of cultures [12], our investigated relationships between values and media behavior might not be transferable to other cultures, and regions. This study has the same limitations as all social science-oriented approaches when dealing with self-reported data, that this is subjective to the user, and does not have a technical measurable component. The goal of such an approach is to enhance the experience of the user, and not to have reliable and objective measures of values but allow the system to enhance the experience.[15].

## CONCLUSIONS

When it comes to identifying requirements for tech solutions in the TV and entertainment environment, we relied for too long on basic characteristics of customers like demographics or basic behaviors. When it comes to long-term behavior and behavior change (customer loyalty, retention rate, churn) a key concept from psychology was not taken into account: values. This article provides a detailed explanation of the impact of values on media behaviors and how to learn from this correlation to design services that lead to higher customer loyalty and better personalization algorithms. To answer the question: global news or romantic movie: Customers who value self-transcendence will (in the long term) stick to a service providing access to global news, while the availability of (the latest) romantic movie will please customers valuing openness to change. Looking into values thus will be key for the design of the next generation of entertainment services.

When applying such value-oriented design approaches it is important to understand that values alone will not be enough to decide for all the requirements to be specified. Especially for the group with values leaning towards conservation, price and the short-term vision on price development will be key. Values are not entities in psychology that are independent of others but are clearly related and intertwined with needs. A tendency towards inflation as a general trend now in Europe obviously will also lead to a shift of short-term needs and be the impulse of changes in values. But using values as key for design will allow us to understand the complexities and interdependencies, and the dynamics and temporal interrelationships that influence the design decisions of such systems.

## REFERENCES

1. Aggarwal, C. C. 2016. Time-and location-sensitive recommender systems. In Recommender Systems. Springer, Cham. pp. 283 to 308
2. Allen, M. W., and Ng, S. H. 1999. The direct and indirect influences of human values on product ownership. Journal of Economic Psychology, *20*(1), pp. 5 to 39.
3. Automated. 2020 A guide to Content Personalization for Publishers, https://headerbidding.co/content-personalization/ (last accessed 03/06/2022)
4. Berger, M., Pottier, G., Pfleging, B. and Bernhaupt, R. 2022. Considering Users' Personal Values in User-Centered Design Processes for Media and Entertainment Services, Human-Centered Software Engineering. HCSE 2022. (LNCS, volume 13482, August 2022)
5. Bernhaupt, R., Murko, C., Pottier, G., and Battut, A. 2019. User Acceptance of

Emotion-Aware Mood Improving Voice Assistants. <u>In Proceedings of IBC 2019</u>

6. Bernhaupt, R., Murko, C., and Pirker, M. 2018. The Future of Media Consumption: Results from a Comparative Study of Consumer Behaviour Changes in the Living Room. <u>In Proceedings of IBC 2018</u>.

7. Boer, D. (forthcoming). SSVS-G. Deutsche Kurzskala des Wertefragebogens SS von S.H. Schwartz (Short Schwartz's Value Survey). To appear in C. Kemper, M. Zenger, & E. Brähler (Eds.). <u>Handbuch Kurzskalen psychologischer Merkmale. Berlin: Medizinisch- Wissenschaftlichen Verlagsgesellschaft</u>.

8. Jain .S., Grover .A., Thakur .P. S. and Choudhary. S. K.. 2015. Trends, problems and solutions of recommender system. <u>International Conference on Computing, Communication & Automation</u>, pp. 955 to 958,

9. Lindeman, M., and Verkasalo, M. 2005. Measuring Values With the Short Schwartz's Value Survey. <u>Journal of Personality Assessment</u>, 85(2), pp. 170 to 178.

10. Masthoff, J. 2015. Group Recommender Systems: Aggregation, Satisfaction and Group Attributes. <u>Recommender Systems Handbook</u>, 743–776.

11. Schwartz, S. H. 2012. An Overview of the Schwartz Theory of Basic Values. Online Readings in Psychology and Culture, 2(1), pp. 1 to 20.

12. Schwartz, S. H. 1994. Are There Universal Aspects in the Structure and Contents of Human Values? Journal of Social Issues, 50(4), pp. 19 to 45.

13. Schwartz, S. H., and Bilsky, W. 1987. Toward A Universal Psychological Structure of Human Values. Journal of Personality and Social Psychology, 53(3), pp. 550 to 562.

14. Verbert, K., Manouselis, N., Ochoa, X., Wolpers, M., Drachsler, H., Bosnic, I., and Duval, E. 2012. Context-Aware Recommender Systems for Learning: A Survey and Future Challenges. IEEE Transactions on Learning Technologies, 5(4), pp. 318 to 335.

15. Wright, K., 2005. Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services, <u>Journal of Computer-Mediated Communication</u>, 10(3).