

DO USERS HATE REDESIGN? – A LITERATURE REVIEW ON USER RESISTANCE TO INTERFACE CHANGES

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Abstract

Resistance to change is an aspect related to human behaviour, widely studied in organizational change, but equally important in system interface redesign, where the related literature is scarce. Redesigning interfaces that individuals are used to implies unlearning the navigation routine and learning a new one, leading to cognitive load. High cognitive load affects user experience and can negatively impact user perceptions and behaviour. Understanding resistance to redesign helps companies successfully implement changes while avoiding backlash or failure. Therefore, this paper presents a literature review of user resistance to change, and suggests a few strategies and further directions for studying it.

Keywords: *user resistance to change, interface design, user interface*

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1. Introduction

Widely studied in organizational change, the concept of resistance to change holds equally important value in technology adoption and system redesign. Either we talk about major changes, such as adopting a new technology, or minor changes related to a systems' interface that an individual is used to, users react to changes in different ways, most of the time having a negative response.

Design changes imply increased cognitive load for users, who have to learn how to navigate the new interface and develop new habits.

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Consequently, user experience (UX) is impacted. Taking into consideration that redesign changes could lead to major backlash from users, a question arises - are these changes really necessary? The answer is that the tech world has a fast pace, and most of the digital products need both functional and design updates in order to add new functionalities or to align to new design or business trends or to users' expectations. Most of the times, the term "redesign" is used for digital products and it implies upgrading the existing design of a product in terms of looks. A redesign process can have different goals, but a general aim is to improve user experience. This process of redesign can consist of a series of incremental changes or a total change implemented at once.

In this article, I aim to better understand user resistance to change (URTC) by reviewing the existing literature, most of it retrieved from the domain of organizational change. Moreover, I will identify what are the main knowledge gaps regarding resistance to change in the process of redesigning a systems' interface.

2. Research background

In the last years, software companies that refreshed the design of their systems had been challenged by user resistance. When experiencing resistance, individuals display different resistance behaviours, such as: active sabotage, passive resistance, defamation (Martinko et al., 1996), sabotaging or not using the system (Markus, 1983), cover procrastination, protesting, criticism (Marakas & Hornik, 1996). There are many industry examples of user resistance to change, and I will describe only a few. At the end of 2017, Snapchat announced a major redesign of its interface. The redesign was controversial and had important negative effects: user interaction with the app significantly decreased, as well as user growth. Publishers reported a decrease in content engagement by 50% or more, leading to a cut in advertising (Nasdaq, 2018). YouGov BrandIndex, an online survey tool that tracks consumer sentiment toward brands, reported a 73% decrease of positive feelings following the redesign, thus eradicating two-years of efforts in building positive consumer sentiment (Hiebert, 2018). Furthermore, a petition asking Snapchat to remove the redesign was launched and signed by over 1.2 million people (Yurieff, 2018). This major backlash almost forced Snapchat to redesign its redesign.

Moving on, Facebook announced a redesign of its interface in 2019. The change was first implemented on the mobile version of the platform, and it has started to be implemented on desktop devices in March 2020 as an opt-in feature. This option was available until September 1, 2020, when the change became permanent (Porter, 2020). Search Engine Journal, one of the leading publications from the domain of digital marketing, published an article under the title “Why users call new Facebook design a nightmare” towards the end of August 2020. This article contains screenshots of users’ posts on Twitter, calling the redesign “confusing”. More than disliking the change, some users claimed to hate it, and even threatened to quit Facebook (Montti, 2020). Similarly, in July 2019, after Twitter launched a new interface design, users have started to express their discontent. Articles about how to get the old interface back by using some tricks have been released (Best, 2019; McCauley, 2019). Users’ outrage went so far that a developer released an add-on called “Good Twitter” that recreated Twitter’s old design. Furthermore, in the fall of 2020, the platform LinkedIn changed the design of its interface with the aim to bring “a warmer, more inclusive feeling” to the product. The team succeeded to roll out the change in less than 60 days (Gandhi & Babyak, 2020). As a reaction, some users described the new design “uninspired”, “weird” or “horrible”, and others users complained that the new look is too similar to Facebook and Twitter.

Understandable, changes in interfaces can lead to discomfort. Users automatically navigate in interfaces that are used to for a long time. Navigation is similar to a routine, a habit, and when the interface design changes, the navigation habits must change as well. This leads to a certain cognitive effort and, thus, dissatisfaction from users. Resistance to change can be defined as the difficulty to stop a routine or the emotional stress felt when individuals face changes (Guo et al., 2013). Habits and routines are hard to break mechanisms, and involve a certain level of distress when changed. Habit formation have an incremental nature – they strengthen with each repetition (Wood & Runger, 2016). When a habit is repeated, the neural and cognitive mechanisms that are associated with the procedural memory slightly change. Furthermore, context cues and responses that are cognitively associated get gradually more connected. When the context cues are met, direct cuing happens, meaning that individuals are prepared to repeat the response (Wood & Neal, 2007). Analyzing changes in habits, Bouton et al. (2011) claim that

old memory traces of previous habits are not necessarily replaced after a new habit is learned.

Habits help individuals save cognitive effort (Jager, 2003) – through habits, the limited cognitive resources are allocated more efficiently. Changing the design of an interface means learning a new navigation routine. As in any learning process or task accomplishment, cognitive load, meaning the mental effort from the working memory (Sweller, 1988), influences learning. The working memory is a type of memory where information gets temporarily stored and manipulated. It contributes to the schema acquisition process and automation. This way, knowledge is stored in the long-term memory as schemas. The working memory is limited in capacity, and when this limit is exceeded, it becomes overloaded. According to Miller (1956), it can hold only seven items of information at a time. However, Sweller et al. (1998) claim that two or three automated items can be processed at a time in the working memory. In user experience, cognitive load represents the mental effort involved in operating a system. High cognitive load decreases usability.

3. Methodology

The aim of this paper is to address user resistance to change, with a focus on the redesign process of a familiar interface. Taking into consideration that literature about user resistance to design change is scarce, a literature review has been conducted for identifying the most relevant studies about resistance to change in organizations and in the human-computer interaction (HCI) field, especially in the context of technology adoption.

By using relevant keywords in the engines Google Scholar and Web of Science, I identified the most important papers regarding the subject, according to their relevance. I will first present the results from organizational change domain, and after the result related to technology.

4. Results

4.1. Results related to resistance to organizational change

Kurt Lewin was one of the first researchers that has addressed the concept of resistance to change, in 1947. In simple terms, resistance to change can be defined as a negative attitude towards change. Mish (2003) defines resistance as the action of opposing something that you disagree with or disapprove of. Resistance is considered an unwanted response that arises

spontaneously as a reaction to change (Ford et al., 2002). People like the status quo, therefore they reject changes (Kim & Kankanhalli, 2009).

Resistance to change is thoroughly approached in the domain of organizational change. In the beginning of this area of studies, researchers have identified a natural tendency in people to prefer the familiar rather than the unknown and innovations (Coch & French, 1948). George and Jones (2001) propose that resistance to change has two components: an attitudinal response manifested through psychological rejection of the change; and a behavioural response, manifested through behaviours that express the unwillingness to support change. Their claims are supported by clinical research (Goodyear, 1990). Piderit (2000) suggest that resistance to change has three components: affective (how an individual feels about the change), cognitive (what they think about it), and behavioural (intentions or actions arising in response to it). This three-dimensional attitude towards change is supported by Oreg (2006). Going further, Piderit (2000) claims that resistance, together with acceptance and ambivalence, represents one possible way of engaging with change. Therefore, resistance is a positive feedback mechanism. Moreover, because some resistance is thoughtful, it could lead to a higher commitment level than acceptance. Both resistance and acceptance have thoughtful and nonthoughtful mechanisms, the same as attitude change (Wegener et al., 2004). Implying high levels of information processing, thoughtful attitudes are more likely to lead to well-considered counterarguments, being thus less likely to be persuaded. Unthoughtful acceptance brings immediate agreement, but it could lead to future problems.

Oreg (2003, 2006) claims that the inclination to resist change is more than a behaviour triggered in a certain situation, being a fundamental personality trait (Oreg, 2003, 2006). Individuals that are high in resistance to change (RTC) are more distraught by change, and recover slowly from its negative impact. RTC has four distinct but interrelated personality-based dimensions: routine seeking, emotional reaction to change, short-term focus, and cognitive rigidity (Oreg, 2003). These four dimensions represent sources of resistance. However, the orientation towards change is influenced by contextual factors as well. Each individual has different RTC inclinations, therefore they enjoy changes and seek them out in different extents. RTC can be measured with a 17-items scale, developed by the same author (Oreg, 2003).

4.2. Results related to resistance to change in the HCI field

User resistance to change (URTC) emerges in the context of interacting with a system. In technology acceptance, URTC is a critical behavioural aspect, as adopting a new technology implies a certain level of change for users. URTC is an adverse reaction to changes, an opposition to changes that occur when a new technology is implemented (Kim & Kankanhalli, 2009). Resistance can be active (visible and easy to identify) or passive (more difficult to detect and manage) (Kim & Kankanhalli, 2009). Klaus and Blanton (2010) argue that user resistance is “the behavioural expression of a user’s opposition to a system implementation during implementation”. These definitions support the claim that most of the studies focus on URTC when adopting a new technology, and supports my idea that there is a knowledge gap in URTC in the redesign of a system that individuals are already used to. Literature about technology acceptance, where changes are voluntarily adopted, is more developed than literature about URTC. Most of the time, changes in systems’ interfaces are involuntary and independent from users.

In 1957, Festinger argued that change is „painful” and may „involve loss”, in the sense of losing control. Lapointe and Rivard (2005) support this view, claiming that resistance arises from perceived threats, such as the loss of power. They studied how user resistance to IT within organizations has evolved and proposed a multilevel longitudinal approach in which they suggest that the main reason of IT resistance are the threats perceived by users. Because users always anticipate the consequences of using a technology, these threats emerge. Some of these threats involve stress, loss of power, inequities or fear. Furthermore, in an exploratory study about IS adoption in healthcare, Ngafeeson and Midha (2014) identified two sources of threats that trigger user resistance: the first is the perceived loss of control, and the second is perceived dissatisfaction.

Markus (1983) defined three approaches for studying user resistance: in the system-oriented approach, factors related to the technology – (performance, the user interface, ease of use, degree of centralization) lead to user resistance; the people-oriented one puts resistance on factors related to the individual or the group – traits, attitude towards the system, and background; the interaction-oriented approach supports the idea that resistance is affected by the perceived social losses emerged from the interaction between users and the system – changing power relationships, job structure,

social structure. Adopting a passive-aggressive approach, Marakas and Hornik (1996) suggest that the stress and fear caused by a new technology leads to recalcitrant behaviour. This is called the passive resistance misuse (PRM).

Ferneley and Sobreperex (2006) proposed the Compliance Resistance Workaround Model in the context of information system implementation. The model differentiates between three resistance behaviors: compliance, resistance, and workaround. Furthermore, it defines two phases of resistance: the first one is an individual phase when non-adoption or resistance decisions arise from cognitive and emotional processes; the second one consists the behaviour that results from that process, behaviour mentioned above: compliance, workaround, negative or positive resistance. Val and Fuentes (2003) defined five major sources of user resistance: distorted perception (includes the denial of unexpected or undesired information), low motivation for change (includes the costs of change and past failure), lack of creative response (lack of creativity in change strategies), political and cultural deadlock, and other sources of resistance (which could be routines, fear of uncertainty). Studying the costs and benefits of change, Kim and Kankanhalli (2009) argue that switching costs significantly increase user resistance. Kim (2011) proposes that sunk costs and uncertainty directly increase user resistance, while transition costs indirectly increase user resistance through a decrease in the perceived value of switching.

5. Conclusions and discussion

Widely studied in organizational behaviour, resistance to change is a phenomenon equally important in the human-computer interaction, where the related literature is scarce. Resistance to change impacts user behaviour in relation to the digital system they use, consequently affecting software companies that decide to change the design of their systems' interfaces. Usually, user resistance to change (URTC) is addressed in the context of technology acceptance.

Reviewing the literature, this paper has certain implications. At a theoretical level, it shows that there is a knowledge gap in user resistance to change in the context of redesigning interfaces that individuals are already used to. Although there is not much academic literature developed around the subject of user resistance to redesign, the study shows that industry examples demonstrate that URTC is a real and common phenomenon that considerably affects companies. Hence, I suggest that further research about user resistance

to change should take into consideration previous experience with a system. Future research into resistance to redesign could also analyse the mechanisms of forming a new habit and the cognitive mechanisms associated with it.

In managerial terms, this study could be useful in helping define strategies that companies could use when launching changes in existing systems or interfaces, in order to avoid users' backlash. At this early point, I would suggest three strategies. The first one is implementing incremental changes, based on the fact that small changes are usually not observed when people behave habitually. The second one is giving users a feeling of control, such as Facebook and other companies have done when they redesigned the user interface – they adopted an optional switch between the old and the new design until a certain date. The third strategy is involving users in the change process by asking them for their opinion – the company could make them vote for their favorite design proposal or they could ask for feedback. Taking into consideration the power of social media and the high number of people companies can reach through online channels, involving users in the redesign process could be easily achieved.

6. References

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