# Using Communication Channels for Boundary Management

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**Abstract**

The spread of communication devices such as smartphones, tablets and laptops goes along with an increasing availability of various communication channels (e.g., instant messaging, phone calls, short message services). Users can communicate across the traditional borders of their life domains (e.g., get a private phone call while at work). Boundary Management deals with the demarcation and transitions between those different life domains. In this work, we investigate if and how individuals use different communication channels to support their individual boundary management style. Our results show that the boundary management style has little influence on the use of communication channels.

## 1 Background

Boundary management is dedicated to the investigation of strategies that individuals pursue regarding the transition between life domains (e.g. work and non-work). The way of managing the permeability between different life domains, the perceived control over those cross domain exchanges as well as the identification with the respective role in a life domain can be used to group people into six boundary management clusters (Kossek & Lautsch 2008; Kossek et al. 2012). Work Warriors (high identification with work) and Overwhelmed reactors (high identification with work and non-work roles) are the two clusters with the lowest boundary control. While Work Warriors have a high permeability of work to non-work issues, the Overwhelmed Reactors show a reciprocal exchange behaviour of the two life domains. The four clusters with a high control over boundary transitions Family Guardians, Fusion Lovers, Dividers, and Nonwork-Eclectics (other role identity), show a high identification with their roles in the non-work as well as in the work domain. Fusion Lovers and Nonwork-Eclectics try to have a balanced reciprocal permeability of life domains while Dividers have the lowest extent of cross-domain exchange. Family Guardians enable a high permeability of non-work to work matters.

The boundary management style is implemented through behaviour, communication, time, or locations but can be also achieved with the help of technology to establish different levels of permeability across different life domains (Kreiner et al. 2009). Fleck et al. (2015) report on the use of certain technical devices that can be used to implement boundary management and show that individuals apply their boundary behaviour to technical devices in order to achieve the desired level of separation of work and private life.

We conclude from these contributions that a satisfying implementation of boundary management can be achieved by using communication devices in order to increase the aspired work-life balance. Although the bandwidth and availability of communication devices is more diverse than ever before, we argue that people nowadays rather vary the communication channel using smartphones and computers/laptops instead of using many different communication devices (Marquart & Gross 2016). Conclusively, the aim of this work is to investigate if and how people use communication channels to support their individual boundary management style.

# 2 Method

Our work is based on an explorative survey in which participants were asked about their used communication devices and channels as well as their boundary management style (using the work-life indicator of Kossek et al. (2012)). Our 16 study participants (8 females) were between 26 and 65 ($M$ = 37.88; $SD$ = 12.77) years old and were informed about the intention and the procedure of the study. In order to ensure that there is a differentiation between work and non-work among the participants, only individuals were included to the study that stated in advance to have at least a part time employment. 68.8% of the participants are full-time (>38 hours weekly working time) and 31.2% are part-time (12-37 hours weekly working time) employed. The participants were asked to fill out a survey consisting of demographics, level of experience and affinity in using technology, open questions about their used communication devices and channels in their everyday life and the Work-Life Indicator, consisting of 17 items measured on a 5-point Likert scale (Kossek et al. 2012).

$$\text{Communication Channel Separation Score} = \frac{3 \times \text{communication channel exclusively used for work} + 2 \times \text{communication channel mainly used for work} + 1 \times \text{communication channel used for work and non-work} + 2 \times \text{communication channel mainly used for non-work} + 3 \times \text{communication channel mainly used for non-work}}{\text{Total number of used communication channels}}$$

*Figure 1: Communication Channel Separation Score according to Fleck et al. (2015)*

To identify the different boundary management profiles among the respondents, we use a confirmatory cluster analysis (K-means) with a six-cluster solution in accordance to Kossek et al. (2012). Then, we calculated a communication channel separation score including weights for the used communication channel with respect to the surrounding life domain

based on the work of Fleck et al. (2015) to measure the level of separation in the use of communication channels. This communication channel separation score can range from 1 (high integration) to 3 (high separation) (cf. Figure 1).

# 3 Results

The results show that participants use 1 to 4 communication devices ($M$ = 2.56, $SD$ = 0.81) and 2 to 6 communication channels ($M$ = 3.44, $SD$ = 1.21) for their daily communication. Participants used the following communication devices (indicated in brackets): Smartphone (phone calls, short message service, instant messaging in Facebook/Skype/WhatsApp, email), mobile phone (phone calls, short message service), home phone (phone calls), fax machine (fax), desktop computer (email) and laptop (email, instant messaging in Facebook and Skype). This result confirms the assumption that smartphones play a crucial role in the communication and that multiple communication channels are used with this device.

Fusion Lovers and Overwhelmed Reactors have the highest number of used devices and channels. Those both and Family Guardians also have the highest difference between used devices and channel, which indicates that they do not limit their communication to one application on one device, although this communication behaviour is not reflected in their communication channel separation score.

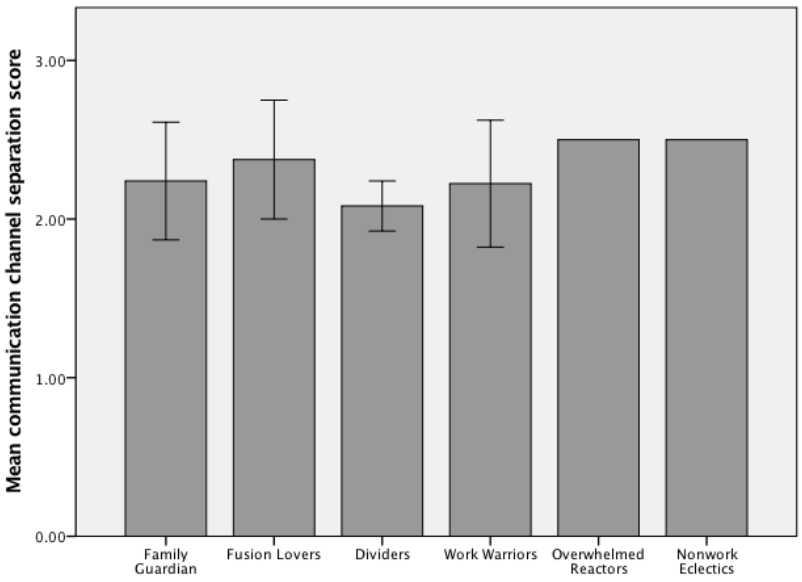


*Figure 2: Mean values of communication channel separation score and boundary management profiles*

Our results presented in Figure 2 show that the separation score is relatively high ($M$ = 2.25, $SD$ = 0.55) across all boundary profiles. The cluster with the highest separation of life domains (Dividers) does not have an explicitly high separation of communication channels. The clusters with a higher integration of interruptions across domains (Fusion Lovers, Non-work-Eclectics) and the cluster that has a low boundary control but a high level of cross-domain interruptions (Overwhelmed Reactors) rather separate their communication channels. This suggests that the study participants regardless of their associated boundary profile and therefore also the level of integration or separation of different life domains have a rather strict separation of communication channels for different life domains.

# 4 Discussion

Our contribution takes Fleck et al's. idea of using communication devices to support individual boundary profiles but focus on the use of different communication channels for this purpose. In contrast to the choice of communication devices, the choice of communication channel always seems to be highly differentiated between different life domains. Our results only differentiate between work and non-work. An extension to examine a more granular specification of non-work life domains should be considered in future work. We conclude from our results that the choice of communication channel depends less on the individual boundary management style, but possibly more on other factors such as the purpose and addressee of the communication. Future work can therefore also benefit not only from a larger sample but also from the consideration of other context factors such as the current activities of users.

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