"Do You Plead Connected?" -
Understanding How Lawyers Deal With Constant Connectivity

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Abstract

Being available and responsive has become an imperative to accomplish the complex work of knowledge workers and to adequately satisfy today's business needs. As a consequence, individuals are required to adopt strategies to cope with increasing connectivity levels. We conducted a Q methodological study among 34 lawyers from Switzerland and Austria to examine the adoption of different strategies for dealing with constant connectivity. Our findings reveal four ICT user types, whereof three types successfully deploy a coping strategy while one type fails. We observe that specific determinants such as the work environment, the hierarchical position, the perceived autonomy as well as personality traits have substantial influence on the adoption of a coping strategy.

1. Introduction

Constant connectivity is a contemporary phenomenon attracting rising interest from Information Systems' (IS) scholars worldwide. Recent technological innovations and huge infrastructural investments in Information and Communication Technology (ICT) [1, 2] open myriad communication channels for business and private purposes and challenge the traditional spatial and temporal boundaries between work and private life [3 p.121]. The adoption of modern ICT on an individual and collective level is generally considered as imperative to accomplish the complex work of knowledge workers and to adequately satisfy today's business needs. Using ICT involves advantages for individuals and organizations regarding greater flexibility and mobility, and subsequently offers the opportunity for location independent working and to reconcile career and family [4, 5].

Although the usage of ICT offers benefits, it also shifts social norms and raises collective expectations towards increasing responsiveness, availability, and higher work engagement [6, 7]. This trend induces an intensification of work [8] and professionals might encounter negative long-term implications for their health and subjective well-being, such as stress, impeded recovery time, and burnout [4, 5, 8].

Constant connectivity is considered a two-edged sword entailing both chances and risks [9]. Accordingly, individuals are requested to deploy strategies for the management of their connectivity level in order to exploit the silver lining of connectivity while avoiding the dark side. Previous research has investigated the handling of constant connectivity and unveiled smartphone user types [4], boundary management groups [10], connectivity states [11, 12], and coping strategies [13, 14]. Furthermore, proposed typologies emerged based on behavioral patterns [15] or demographic criteria [16, 17].

Since constant connectivity is penetrating all our areas of life, we argue to consider it as a holistic concept and to incorporate the individual's ecosystem more prominently when assessing connectivity-related behavior. In this paper we identify distinct user types and explore their perspective and subjective setting towards constant connectivity. Our analysis indicates the existence of determinants – such as the work environment, the perceived autonomy, personality traits and demographic characteristics – which influence the adoption of a specific coping strategy.

Our research thus offers insights into the complex interplay between the individual's subjectivity, context specifics and personality traits and contributes to a better understanding of the rationales and motives regarding the application of coping strategies.

To reveal the individual's subjectivity on dealing with constant connectivity we defined the following

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research question: *Which user types emerge among individuals dealing with constant connectivity?*

In addressing this question we have applied Q methodology to uncover and explore different user types of lawyers. Q methodology is preferred in research to systematically study subjective viewpoints of individuals and to develop typologies, since it correlates individuals' viewpoints of people rather than variables selected by the researchers [18, 19].

Following the modus operandi of Q methodology, lawyers that share similar viewpoints have been merged to four distinct ICT user types that deploy different strategies to deal with constant connectivity. The characterization of these types provides a starting point for a detailed enquiry into coping strategies [20]. Two of the identified types employ segmentation strategies, while one type exerts an integration strategy and another type utilizes a more situative approach combining elements from both. Some professionals struggle to successfully deploy a coping strategy and are significantly more stressed by constant connectivity.

2. Theoretical Background

The noun connectivity stands for the state of being connected, or the state of being able to connect between two or more points in a network [1 p.4]. Connectivity is often referred to computing and digital communication systems, where interconnected electronic devices enable communication and data transfer across a network [21]. However, the term is nowadays not just attributed to technical systems, but also covers social links between individuals and collectives [22].

Constant connectivity entails various beneficial aspects for individuals and organizations. Especially mobile devices and modern technologies (e.g. cloud services, remote services) enable a decoupling of work from workplace and dissolve temporal and spatial boundaries between business and private life. This decoupling involves benefits for employees in regard to flexibility, mobility, and compatibility of family and work [4, 5]. New working time schemes, such as flextime or annual working time, contrast the traditional work arrangements and offer employees and organizations more scope in planning working hours. Employees can execute work independent from workplace and engage with clients, suppliers, and colleagues anytime from anywhere [4, 5, 23]. This flexibility and mobility can refer to positive work outcomes such as increased motivation and job satisfaction [8]. Having an organizational culture in place, where employees are constantly "online", also speeds up support from co-workers. [9, 24].

However, the inherent characteristics of ICT and its dominance in people's life foster the blurring lines among business and private life, in particular because mobile technologies and steady internet access raise the likelihood of communication and dissolve temporal and spatial boundaries [3 p.121]. This might lead to more role conflicts between business and private roles [10, 25], and might also disturb the employees' resilience. Recovery time can be interrupted or reduced in case an employee is contacted during off time and/or mandated with urgent work tasks [5, 26]. While there is wide agreement that it is important to consider context specifics (i.e. work environment, hierarchical level, autonomy, collective expectations) and personality traits when assessing the individual connectivity-related behavior [5, 7, 27, 28], research has not yet succeeded to consistently explain the effect of these parameters on how individuals cope with constant connectivity. Instead, findings indicate that there is often a complex interplay between different parameters at work. In the case of autonomy, Mazmanian et al. [7] describe this as the autonomy paradox. High autonomy at work is generally found to support professionals in dealing appropriately with constant connectivity and also to have an alleviating effect on the negative consequences [28]. However, the opportunity to constantly communicate also raises collective expectations towards higher availability, responsiveness, and engagement [4, 5, 7]. Mazmanian et al. [7] found that under the influence of these expectations individuals might limit their own autonomy, because they feel obliged of being always connected and aligned to the workplace and the need to quickly respond to work-related issues, thus reverting the originally positive effect of autonomy. As demonstrated by the role of collective expectations, it is not sufficient to frame constant connectivity as a technological capability alone. It should also include the perception or possibility to be constantly connected with others [11, 29].

Literature reveals three main approaches for managing connectivity and balancing work-life domain, namely the coping strategy of segmentation, integration, and active management [10, 12-14, 30]. The first one aims at maintaining strong boundaries (e.g. temporal or physical ones) between work and private life [10, 31]. In contrast, an integration strategy is characterized by only weak boundaries between those spheres [10, 13]. The strategies of segmentation and integration are not fully opposing, instead they are situated along a continuum ranging from high segmentation to high integration [31]. An

active management strategy requires a continuous adjustment of the boundary strength depending on the situation at hand [12, 13], hence, results in deliberately switching between the aforementioned strategies of segmentation and integration. This certainly causes frequent micro-role transitions, but aims to increase respectively decrease the connectivity level for certain situations and to find a state of requisite connectivity [12, 13]. Micro-boundary strategies (e.g., checking work and private emails on the same device but on separate applications), as suggested by Cecchinato et al. [32], are an effective way to minimize the mental strain caused by such micro-role transitions [31]. In addition, research has found out that different trajectories of use can emerge even within the same organization [33].

Individuals decide for one of these strategies according to personal preferences and life situation (e.g. living prospects, career planning, family situation) [14]. Since such influencing stimuli might change over time and individuals continually learn from their behavior [34], an adaptation or change of the selected strategy is likely [10].

Different types of individuals apply different coping strategies, even under similar conditions, depending on individual technical skills, character, and abilities. Hypothesizing that connectivity levels can vary along a continuum between functional and dysfunctional, MacCormick et al. [4] have characterized three ideal types. Both representing dysfunctional states, hypo- and hyper-connector suffer from too less respectively too much connectivity, whereas dynamic connectors change the level of connectivity according to situational demand and so are able to optimize their functional engagement. Dynamic connectors typically experience high autonomy and flexibility, but also possess abilities in self-control and self-discipline.

While MacCormick et al. [4] address boundary management implicitly, Duxbury et al. [10] have defined types that are characterized by type and success of their boundary management for using smartphones. Segmentors use their business smartphones only during working hours, integrators also during non-working hours. For the latter this is a successful strategy to combine work and family roles. In contrast, the struggling segmentor does not succeed in employing a successful segmentation strategy like the segmentor, though aiming for it. This type allows blurring of work and life boundaries as individuals of this type are unable to resist the pressure of being constantly available.

In an attempt to explain constant connectivity independent from specific devices, Geiger et al. [15]

have identified four different types inside a two dimensional continuum of autonomy and responsiveness. While the three types pragmatist, bricoleur, and maniac experience a medium to high autonomy, they differ with regard to the level of responsiveness and the stability of this level. In contrast, the passenger, which is the fourth type, experiences a low level of autonomy, while consistently maintaining a high level of responsiveness.

As shown above, research has already applied a wide variety of lenses to study the coping of individuals with constant connectivity. However, as the decision how to engage with constant connectivity is ultimately an individual one, in our study we focus on identifying these subjective points of view. Simultaneously, we aim to integrate the findings from extant research in order to develop a holistic understanding of these viewpoints.

3. Research Methodology

Referring to our research question this paper focuses on user types and the influencing factors that trigger the adoption and implementation of individual coping strategies. We explore the complex interplay between subjectivity, context specifics and personality traits that drive the individual's decisions for or against a coping strategy. Q methodology reveals "a person's viewpoint, opinion, beliefs, attitude, and the like" [35] and provides a thorough basis for the formulation of typologies as a starting point for complex theory building [20]. Indeed, Q methodology has proven to be an appropriate way to develop sophisticated typologies and yields deep insights into user and group attitudes in the context of ICT [36, 37], although its application in IS research is still limited [36, 38, 39].

Q methodology combines the "strengths of both, quantitative and qualitative methods" [40] and allows to systematically study the subjective viewpoints of individuals [35 p.93]. It is considered to be a replicable and reliable research methodology that allows to explore and gain insights into the subjectivity of an individual [41]. The initial task in Q methodology is to collect a representative set of items related to the research domain. These items, usually verbal statements, should capture the full gamut of existing opinions and constitute the basis for the subsequent formation of the Q set. During the data collection process participants are asked to rank order the statements from the Q set based on certain conditions, typically from "agree" to "disagree". This sorting, called Q sort, allows the researcher to capture

the individual viewpoints according to the research domain. Once the data collection process is finished, all Q sorts are inter-correlated and a factor analysis is performed. Participants who sorted the statements in a similar way are grouped in the same factor. Each factor represents an ideal-theoretic viewpoint shared within a group of individuals. Q methodology only requires a small number of participants, since it aims to establish the existence of viewpoints rather than generalizability [18].

In this paper, we specifically focused on lawyers with a completed bar exam from any field of law as a proxy for knowledge workers. The development of the Q set was based on the guidelines delineated by Watts and Stenner [42] and started by interviewing two domain-experts from distinct lawyer's office. These semi-structured interviews shed light on the professional's own experience with constant connectivity and enabled us a general understanding about the research domain. Notes were taken during both interviews and later scanned for significant statements. Additional statements were gathered via research in literature, using keywords such as lawyer, constant connectivity, work-life balance, and all combinations of it. This process ended up in the collection of more than 200 statements.

In order to design a balanced Q set that covers all relevant ground, we defined five themes, which have emerged during the review process of our statements. The selection of these respects the recommendation of prior research to incorporate context specific circumstances and personality traits, when assessing the individual connectivity-related behavior [5, 7, 27, 28]. That is why we determined the following themes: antecedents for an increase in constant connectivity, implications of constant connectivity for individuals, moderators, coping strategies/skills, and complementary statements.

Next, we removed duplicates and rephrased ambiguous statements, the remaining ones were assigned to one of the aforementioned themes. This iterative reduction process resulted in a representative Q set containing 50 statements, ten in each theme. Three piloting phases were conducted including a small sample of individuals from the academic field and the legal profession. In all phases, the individuals were requested to provide feedback about the relevance and readability of the statements.

Data were collected online during a ten-week period in fall 2016 using the open source software HtmlQ [43]. All participants received an email containing the link to the hosting web page and credentials to log in. Detailed instructions were provided to guide the participants through the whole sorting process. Once the sorting task was finished,

participants could review and adjust their sorting order and were requested to justify the placement of the most extreme statements. We used a forced-choice distribution ranging from +4 to -4 to ease the sorting task for the participants (Table 1). The whole process concluded with a questionnaire about demographics and the work environment (e.g. size of business, hierarchical position, working time flexibility).

Table 1. Forced choice distribution

disagree								agree
-4	-3	-2	-1	0	+1	+2	+3	+4

We directly invited 15 lawyers to participate in our study, each personally known by the researcher. In addition, all participants were asked to share the invitation among co-workers and their professional network in order to reach a broad variety of different lawyer types. Screening questions were applied to monitor the inclusion criteria of a completed bar exam. Approximately 120 individuals received an invitation and 36 participated, the outcome of this is a participation quota of 30%. Two Q sorts had to be excluded since they did not match the inclusion criteria. The final sample contained 34 participants from Switzerland and Austria.

Data were analyzed by using the software package of PQMethod [44], which is especially tailored to analyze Q sort data. We started with a principal component analysis (PCA) to extract eight unrotated factors and created an unrotated factor matrix. To determine the final number of factors we calculated the standard error of a zero-order loading for a sample size of n=34 and multiplied it by the z-value of a 99% two-sided confidence interval [18 p.283]. Using this method, we defined a significance level of ±0.45 (rounded up) and retained all factors with at least two significant factor loadings, in our case four factors. In addition we performed a sensitivity analysis and checked the correlations between the factor scores for three respectively five extracted factors. The analysis indicated that our four factor solution leads to a meaningful solution. Next, the four factors were rotated by the automated Varimax procedure. Factor flagging was executed by hand, using again significant factor loadings of ±0.45

or above as criteria. Three Q sorts were confounded and loaded significantly on two factors. Each was allocated to the factor with its higher loading. Three Q sorts were non-significant and didn't load significantly on any of the factors. These Q sorts could not be allocated to one of the four factors. Our final solution accounts for 31 of the 34 Q sorts and explains a cumulative 51% of the study variance.

4. Results

The analysis of our data reveals four different factors. Each factor represents a distinct ICT user type of lawyers, which has adopted a different strategy to cope with constant connectivity. Statements and factor scores are included in the Appendix to increase the replicability and understanding of the results. When tracking the results, the reader should consider the whole configuration of statements and not just focusing on the highest and lowest ranked ones. Even if our participants do the same job and fulfill similar duties, they are specialized in various fields of law and work for different sized companies, including small lawyer's office with a local client base, large multinational lawyer's office, and industrial companies with in-house counsels. The sample consisted of 34 participants, on average 43 years old, further demographic characteristics and statistical data are presented in Table 2.

Table 2. Demographics

	Count	% of Total
Gender		
Male	22	64.7%
Female	11	32.4%
Transgender	1	2.9%
Age		
<26 years	0	0.0%
26-35 years	11	32.4%
36-45 years	13	38.2%
46-55 years	4	11.8%
>55 years	6	17.6%
Net Income per Year		
<100'000 CHF	2	5.9%
100'001-150'000 CHF	10	29.4%
150'001-220'000 CHF	9	26.5%
>220'001 CHF	9	26.5%
Not Specified	4	11.8%

User type 1 (termed segmentor) has an eigenvalue of 5.20 and explains 15% of the study variance. Ten participants (7 male, 3 female) are significantly associated with user type 1, they are on average 46 years old and four out of ten have underage children. The income class is between 100'000 CHF and 220'000 CHF net income per year.

We have termed this user type "segmentor" because participants belonging to this type typically strive for a segmentation strategy with clear physical and psychological boundaries between business and private life. Segmentors prefer to stay longer in the office instead of taking remaining work at home for finishing it, and they don't blur professional and private topics in conversations. Professionalism and a structured work mode are generally regarded as prerequisites for high quality and efficiency at work. Segmentors have established a very strict usage of ICT and have set clear limits whether, when and where to use them. Even in stressful situations, segmentors try to obey their self-imposed course of action and avoid multitasking or frequent switches between working tasks. Two conditions seem to be key for the success of this segmentation strategy: autonomy at work and self-discipline. Segmentors also attach great importance on work-life balance. They dedicate on average 11 hours per week for hobbies, although three participants have a reduced employment level (2 x 80%, 1 x 90%). Sportive and social leisure activities act supportive for the mental and physiological balance of the segmentor.

User type 2 (termed integrator) has an eigenvalue of 3.62 and explains 11% of the study variance. Six participants (5 male, 1 female) are significantly associated with user type 2. Only one out of six has underage children though the average age of this user type is the highest among all types (51 years). They spend ten hours weekly for hobbies and are assigned to a net income class of 220'000 CHF per year. Integrators rather work in medium to large sized lawyer's office with international clients and are situated on a higher hierarchical position. They perceive today's environment as highly competitive with rising client expectations. This induces, in combination with their attendance of an executive position, to an always-connected lifestyle. Thus, integrators pursue an integration strategy characterized by flexible and permeable boundaries between business and private life. Their attitude towards innovation and advancement of ICT is quite positive since they enhance connectivity, enlarge flexibility and mobility and allow the reconcilement of business and familial obligations. Devices like smartphones and laptops enable to work outside of the office and new technologies increase the ability to connect with and get connected by co-workers and clients at any time. This work-life integration results in more frequent cross-role interruptions between different tasks and bears the danger of conflicting roles and additional stress. Though, since this high connectivity level supports the integrator's lifestyle, being constantly connected is not a burden, but rather

auxiliary and integrators feel no increase in their stress level due to constant connectivity.

User type 3 (termed passenger) has an eigenvalue of 5.26 and explains 15% of the study variance. While the distribution of sexes in the whole study sample was 2/3 male and 1/3 female the proportion of user type 3 is contrary. Ten persons, seven of them are female, are significantly associated with this type. The average age is 36 years, only two out of ten have underage children. One participant has a reduced employment level (80%) and eight hours are spent for hobbies on a weekly average. The net income class is between 100'000 CHF and 220'000 CHF per year. User type 3 can be described as a person, which is disciplined and guided by its inner urge to fulfill others expectations, hence a "passenger" of its own burden. Passengers are typically service oriented, loyal employees and highly responsive. Checking email communication during off-times and staying "online" is not the exception, but has become the rule for them. The crucial difference regarding the integrator is though, that passengers feel obligated to stay connected and available for clients and co-workers to fulfill expectations. The passengers' behavior is primarily motivated by third parties, which makes it tough for them to manage the connectivity level. As a consequence of this matter, passengers experience a loss of control at work and are significantly more stressed by constant connectivity than the other user types. They are living in a constant state of restlessness. Modern and innovative ICT is thus deemed as impractical and of low interest. Presumably because of these negative experiences, work-life balance is highly important for the passenger. Countermeasures have been installed to strictly separate business and private life and to protect themselves from stress. However, because of their loyalty and lower autonomy at work, passengers cannot always adhere to these countermeasures but suffer from negative consequences of constant connectivity.

User type 4 (termed driver) has an eigenvalue of 3.55 and explains 10% of the study variance. There are in total five participants significantly associated with this user type, all are males at an average 42 years old, and three have underage children. The weekly time spent for hobbies is six hours, the lowest value among all factors. Participants associated with this user type are not employees, but either partner or remunerated by profit and assigned to the net income class of 220'000 CHF per year. Since drivers typically occupy an executive position, albeit in smaller lawyer's office with a rather local client base, they are actively involved in the decision-making process and consequently in the "driver-seat" of the company. The word "driver" moreover implies a certain degree of freedom about how, when and to whom to connect. Contrasting the three other user types, drivers don't apply a distinct segmentation or an integration strategy, they rather monitor the continual flow of incoming information, while filtering out and react to important issues. In this search for the optimal state of connectivity, ICT is perceived as helpful and practical since it enables location independent working and enlarges availability (e.g. on business trips, during home office, at the client site). Despite these potential benefits regarding flexibility and mobility, drivers answer selectively to any kind of requests from co-workers and clients during leisure time. Also in stressful periods, drivers tend to communicate less and don't use multiple communication channels, instead they execute open issues according to criteria such as importance and urgency. Drivers experience very high autonomy in business life, but struggle at times to completely cut off from work and feel some impairments regarding recovery time.

5. Discussion

The picture that emerges from our study is multifaceted. We identified four different types of ICT users that reside in an organizational environment. All four types of lawyers not only agree that their job is challenging and exciting, but also that it causes a considerably high level of pressure at work. This is reflected by scarcity of time and the need to cope with a large number of tasks running in parallel. Despite the apparent convergence of the nature of their work, all four types perceive constant connectivity significantly different and subsequently oscillate between its benefits and consequences. This diverse perception reflects additionally on their ability to successfully employ coping strategies. In the following we juxtapose the four types and seek explanations for these differences.

The integrator is situated on a higher hierarchical position and works in large offices with international clients. Today's rivalry has raised the working commitments for business success thus, the integrator comprehends ICT as a means of flexibility and mobility, which facilitates the balance between professional and personal requests. Due to high work autonomy, integrators adopt a flexible working model that is highly supported by the emergence of ICT. The driver is mainly partner or remunerated by profit and experiences the highest work autonomy among the four types. Since the driver operates in small size

offices with local focus, rivalry is not a major concern for them and subsequently, ICT is not regarded as an essential tool to run the business but rather as "nice to have". Opposed to the integrator and the driver, the segmentor and the passenger hold a lower hierarchical position and perceive to have a decent but slightly lower level of autonomy at work. They embrace their work and they emphasize on quality and efficiency. Both types recognize ICT as a burden for different reasons. The segmentor prefers traditional means of communication and is especially in favor of face-to-face contact. Conversely, for the passenger ICT is coupled with continuous availability and therefore it is perceived as a symbol of stress.

Looking at the big picture, we recognize three kinds of strategies namely integration, segmentation, and situative, which are correlated with the findings of [10, 14]. Three types are successful on the employment and implementation of such coping strategies, while one type proves to be unsuccessful. The integrators by following an integrative strategy embrace an "always on" environment in which constant availability to colleagues and clients has become a norm. Involving ICT, in all aspects of their daily routine, assists on leading in parallel their personal and professional life. Thus, penetrations are enacted and welcomed rather than stressful and disturbing. On the other hand, the segmentors manage to apply a segmentation strategy with clear distinction between professional and personal boundaries. ICT connectivity is rather low outside working hours as segmentors rely on their co-workers when absent. Furthermore, self-discipline is essential to refrain from ICT during leisure time. The drivers, instead of a pre-specified strategy for dealing with constant connectivity, follow a more situative approach. They take advantage of ICT as long as it supports their tasks, but as soon as they experience information overload and feel their stress level increasing, they employ micro-boundary practices that allow them to sustain the workflow [32]. Opposed to all three types, the passengers attempt to employ coping strategies, which however they fail to sustain. They place high importance on a good work-life balance but work is always the first priority. Thus, even though they strive for clear boundaries they rarely succeed.

We identified various factors that could provide an explanation why coping strategies succeed for the integrators, segmentors and drivers, while fail for the passengers, even though all four types share an similar professional background. In line with Mazmanian [33] we recognize that users' enactment on technology is strongly associated with their experiences towards ICT. Following an integrative strategy leads to the alignment of professional and personal requests. The integrator by employing an integrative strategy is able to embrace the benefits of ICT, while refrain from stress and frustration. The segmentor pursues a different approach, which still balances the negative effects of constant connectivity and allows the establishment of concrete boundaries between work and personal life. The success of the segmentation strategy could also be associated with trust since segmentors rely heavily on their colleagues to make decisions in their absence [45]. The driver operates in a rather traditional environment with local clients and few subordinates. In this case a situative strategy is achievable, since constant connectivity has not entirely penetrated within the working environment. Thus, the information flow can be better balanced through the employment of micro-boundary strategies [32]. Conversely passengers are situated on a different position and experience mainly the negative outcomes of constant connectivity.

Passengers' inability to cope with the negative effects of constant connectivity can be attributed to their loyalty towards their company, co-workers and clients, which incites them to remain accessible and highly responsive to all requests. Professionals like the integrator type that follow a strategy of immediate responsiveness and continuous availability, do not expect others to be evenly connected. Passengers, however, seem to have internalized expectations with regard to being constantly available and responsive due to high loyalty. Even if their colleagues or supervisors do not expect them to be available and responsive in a 24/7 basis, they still feel the obligation of being always connected and aligned to the workplace. Our results indicate further that autonomy does not certainly alleviate the negative effects of constant connectivity. Passengers although perceive to acquire high autonomy for the execution of their working tasks, they feel trapped in an "always on" environment by prioritizing work-related issues. Thus, autonomy decreases due to uncontrolled use and lack of ICT self-discipline.

Summarizing our findings, we recognize that the negative effects of constant connectivity vary among individuals with similar tasks and professional identities. All participants of our study agreed that their working environment is demanding with high amount of tasks and limited time. However, when it comes to dealing with constant connectivity, only passengers fail to adopt a mitigation strategy. Hence, we can indicate that dealing successfully or unsuccessfully with constant connectivity depends on a number of factors that require an in depth

examination. Such factors range from the settings of the working environment and the individuals' autonomy to personality traits and demographic characteristics. As our methodological approach does not allow drawing conclusions about the aforementioned observations, we strongly recommend future research to focus on these phenomena and allow a deeper understanding of the antecedents of successful and unsuccessful mitigation strategies for constant connectivity.

Coming to the managerial implications, the identification of the four types and the emergent coping strategies can improve the organizational environment in multiple levels. First, realizing that autonomy levels vary between individuals with the same hierarchical position could assist on balancing the execution of working tasks. Supposedly the segmentor relies extremely on the passenger and such reliance increases the passenger's workload. A redistribution of duties is essential, in order to remove significant burden from passenger's daily routine. Second, discussing openly the expected availability and responsiveness between the managers and the subordinates could evaporate the guilt that passengers carry when they try to disconnect or ignore incoming messages. Thus, clarifying the collective expectations already from the beginning of a professional relationship could allow employees to cope successfully with the negative consequences of constant connectivity. Last, raising awareness of possible mitigation strategies and taking concrete organizational measures could improve work performance, productivity, and well-being.

6. Conclusion

We applied Q methodology to investigate different types of knowledge workers dealing with the negative effects of constant connectivity. Focusing specifically on lawyers, four types of professionals emerged namely the integrator, the segmentor, the driver and the passenger that deal considerably different with constant connectivity. By examining the four types, we recognize that the selection of a coping strategy shifts among individuals and we can indicate that specific determinants have a substantial influence on this decision. Such determinants encompass the work environment, the hierarchical position, the perceived autonomy as well as personality traits. We conclude that constant connectivity should not be treated as an all-embracing phenomenon since it is subject to various factors that need to be taken into consideration.

As with all exploratory studies, ours has some limitations to be acknowledged. Our study sample is limited to the Switzerland and Austria region. We consider cultural differences that leverage the working styles and expectations among countries, can considerably influence the individuals' ability to deal with constant connectivity and the corresponding strategies. Thus, we emphasize the need for further studies in broader geographical areas to allow an in depth understanding of the phenomenon, its impact and the coping strategies. The participants of the study were not randomly selected but upon the professional network of one of the authors. This might lead to an unbalanced sample. However, as Q methodology is primarily concerned to establish individual viewpoints rather than to reflect proportions in a wider population we deem our methodology as appropriate for the intended objective.

We consider that the phenomenon of constant connectivity acquires particular interest due to the continuous emergence of new technologies. Hence, future research should provide a more profound understanding of how the individuals' behavior is determined by various factors. Future studies should focus on unveiling additional coping strategies, which would extend our knowledge on the field and enhance the connectivity research stream. Last, as the popularity of ICT extends beyond knowledge workers, we deem important for future work to unravel the effects of constant connectivity also for blue collar workers [46] and provide a deeper understanding of the determinants in non-office settings.

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8. Appendix

No.	Statements	Factor 1		Factor 2		Factor 3		Factor 4	
	Factor Scores with Corresponding Ranks								
1	My impression is that workloads have risen during the last years.	0,32	17	0,52	15	0,00	29	**-1,36**	**47**
2	I scan through the headings of incoming emails to get an overview.	0,74	11	0,40	17	0,53	17	-0,35	30
3	In stressful periods, I use several communication channels in parallel.	-0,56	36	0,98	10	0,07	24	-0,21	28
4	If many tasks occur at once, I have troubles for prioritizing.	-0,99	40	**-1,28**	**44**	-1,02	39	**-1,34**	**46**
5	I'm puzzled, when I see dozens of unread emails in my colleague's inbox.	-0,12	28	-0,59	38	-1,05	40	1,07	10
6	During leisure time, I cut-off from my job and win distance well.	**1,85**	**3**	-0,63	41	-1,08	41	0,21	21
7	I hand over my private mobile phone number only to few clients.	0,95	9	-0,61	40	**1,20**	**7**	**2,05**	**1**
8	I feel stressed by unread emails in my inbox.	-0,08	27	-0,61	39	**1,37**	**4**	0,12	23
9	I think today's rivalry has increased compared to earlier times.	0,56	14	0,49	16	0,64	16	-1,04	43
10	For me, it doesn't matter if I communicate with a person face-to-face or virtually.	**-1,47**	**47**	**-1,78**	**48**	**-1,18**	**43**	0,51	15
11	I would rather stay longer in the office, than work off open-issues from home.	0,19	20	**-2,19**	**49**	**1,22**	**6**	0,42	17
12	I usually carry work-related documents on private trips.	**-1,40**	**46**	-0,10	29	**-1,72**	**49**	**-1,30**	**45**
13	I often feel high pressure of time during my job.	0,64	13	0,58	13	1,03	10	0,54	14
14	If someone always answers to emails almost immediately, I wonder if that person doesn't have any other tasks.	0,34	16	**-1,58**	**46**	-0,61	34	-0,99	42
15	I work through my emails in packets.	-0,22	31	**-0,94**	**43**	-0,84	35	**-1,5**	**48**
16	Sometimes, I feel overwhelmed by the amount of incoming information.	0,05	24	0,24	22	0,02	28	-0,46	33
17	A conversation is much more efficient and productive than written messages.	**1,31**	**7**	**1,76**	**1**	0,75	13	-0,54	35
18	I decide by myself, which calls and requests I respond to during leisure time.	**1,42**	**6**	0,11	25	-0,17	32	**1,45**	**5**
19	Many clients expect, that their requests should be handled immediately.	-0,02	26	**1,15**	**8**	**1,67**	**2**	0,00	25
20	I experience high autonomy for completing my working tasks.	0,64	12	**1,28**	**7**	0,65	15	**1,33**	**7**
21	Even in stressful periods, it is important for me to pay attention to courtesy and spelling mistakes in emails.	**1,19**	**8**	-0,08	28	1,11	9	**2,04**	**2**
22	New technologies enable working colleagues to contact me anytime.	-0,14	29	**1,30**	**6**	0,27	20	0,55	13
23	If I don't feel prepared for a conversation with a specific person, I don't pick up the phone.	-0,62	37	**-1,66**	**47**	**-1,34**	**47**	-0,53	34
24	I immediately read incoming emails and reply, if needed.	-0,79	39	-0,34	33	-0,14	31	-0,41	32
25	I think, business and private life are getting blurred increasingly.	-0,29	32	0,04	27	0,38	19	-0,87	39
26	If I receive an email who wants to send out a read receipt, I feel controlled.	0,56	15	-0,83	42	0,17	22	**-1,63**	**49**
27	Professional and private topics are blurred in my conversations.	**-1,32**	**45**	-0,48	36	**-1,59**	**48**	-0,06	26
28	I handle client requests systematically (e.g. urgency, turnover, complexity).	0,75	10	0,94	11	0,84	12	**1,70**	**4**
29	A good work-life balance is important to me.	**1,68**	**5**	-0,27	31	**1,66**	**3**	0,29	20
30	I can decide for myself, when I go to work in the morning.	**1,76**	**4**	**1,30**	**5**	0,02	27	**1,41**	**6**
31	I always expect (also outside regular working hours) calls and emails from clients and/or co-workers.	**-1,79**	**50**	-0,23	30	**-1,31**	**45**	**-1,70**	**50**
32	I'm very interested in innovations in the area of information and communication technology (ICT).	0,04	25	0,56	14	-0,89	37	-0,93	41
33	Outside of regular working hours I don't reply to calls from clients of co-workers.	-0,42	34	**-1,56**	**45**	-1,09	42	-0,29	29
34	In my job it is essential to make prompt decisions.	0,18	21	0,31	20	**1,12**	**8**	0,39	18
35	During an audio conference, I usually deal with other tasks as well.	**-1,70**	**49**	-0,47	35	**-1,29**	**44**	-0,81	37
36	If I couldn't finish the planned work during workday, I take it at home to work it off.	-1,06	41	**1,37**	**4**	**-1,32**	**46**	**-1,16**	**44**
37	In order to work without interruption, I forward the phone to my mailbox.	-0,35	33	-0,37	34	**-1,80**	**50**	0,14	22
38	When I'm at home, I always think of business matters.	**-1,61**	**48**	**-2,35**	**50**	-0,94	38	-0,4	31
39	If the workload is high, I tend to communicate consciously less.	0,23	19	0,18	23	0,03	26	0,69	12
40	I frequently switch between different tasks.	**-1,20**	**43**	0,31	19	0,74	14	0,47	16
41	Smartphone and laptop are useful and enable me to work outside of my office.	0,25	18	1,14	9	0,45	18	1,08	9
42	I adapt my leisure activities at short notice, in order to handle professional matters.	**-1,26**	**44**	-0,49	37	0,13	23	-0,74	36
43	If I don't reach someone via phone, I expect a call-back.	-0,19	30	0,16	24	0,04	25	0,01	24
44	I trust that my working colleagues will make the right decisions during my absence.	**1,97**	**1**	0,28	21	0,97	11	**1,11**	**8**
45	My job is challenging and exciting.	**1,87**	**2**	**1,58**	**3**	**1,28**	**5**	**1,80**	**3**
46	I think it's practical to be always connected, it allows me to plan and discuss issues at short notice.	-1,07	42	0,70	12	-0,88	36	0,84	11
47	I organize and archive my emails in a folder system.	0,17	22	0,09	26	-0,24	33	-0,91	40
48	I think, today's competitive environment forces it to be constantly available.	-0,42	35	**1,63**	**2**	0,18	21	-0,82	38
49	Constant connectivity increases my stress level.	0,09	23	-0,29	32	**1,98**	**1**	0,30	19
50	The fault tolerance in work routine (conduct of a case) is today clearly lower than before.	-0,69	38	0,34	18	-0,01	30	-0,14	27

To help the reader retrace and reinterpret the findings, the highest (+4, +3) and lowest (-4, -3) ranked statements are indicated by grey background color for each factor.