

WIRTSCHAFT UND MANAGEMENT

SCHRIFTENREIHE ZUR WIRTSCHAFTSWISSENSCHAFTLICHEN FORSCHUNG UND PRAXIS

Cryptocurrencies, Technostress, HR Management, Didactics and Group Reflection



Domínguez Jurado, José Miguel / García Ruiz, Ricardo / Salem, Arman Sam
Creation and evolution of the cryptocurrency market

Jürgen Radel
Personal Bonds and Hedging Power: Using a Teaching Case to Reflect the Impact
of Executive Decision-Making on the Wider System of an Organization

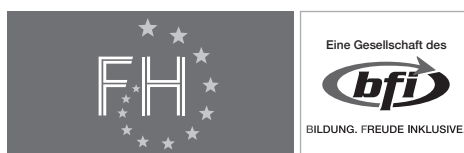
Laura Dörfler
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Editorial



Andreas Breinbauer
Head of the FH Supervisory
Council, University of Applied
Sciences BFI Vienna

Dear reader,

The latest edition in our series is entitled “Cryptocurrencies, Technostress, HR Management, Didactics and Group Reflection”.

The first article, written by **José Miguel Domínguez Jurado, Ricardo García Ruiz and Arman Sam Salem**, looks at cryptocurrencies for which there is strong demand, such as Bitcoin and Ethereum. The focus is on explaining the processes behind creating and operating a cryptocurrency, and on analysing this new market, especially in terms of its capitalisation, transaction capacity and ability to adopt new currencies. In conclusion, the authors highlight the significance of cryptocurrencies for the “Internet of Things” (IoT).

The second paper, from **Jürgen Radel**, centres on a case study of a conflict between members of a management team, and how the case study can be used in higher education. First, the author outlines the didactic concept behind case study-based teaching, followed by a presentation of the case itself. He then provides valuable pointers on using the case in teaching sessions.

In her article, **Laura Dörfler** of the University of Applied Sciences BFI Vienna – who this year won the Chamber of Labour Science Award (Wissenschaftspreis der AK) – investigates the subject of age discrimination in staff selection decisions in various industries and posts in Austria. Human resource managers from a range of organisations in the country were surveyed as part of the study. They were given hypothetical application scenarios and asked to indicate the probability of the respective applicant being appointed.

In the fourth paper, another member of the University of Applied Sciences BFI Vienna, **Barbara Waldhauser**, examines challenges resulting from technostress, which are due to interruptions and divided attention caused by information and communication technologies (ICTs). Based on systematic literature research, the article discusses the effects of ICT-related interruptions (such as e-mails, messaging and smartphone use) on productivity, as well as perceived stress and impacts on the workplace. The research covered studies that investigated ICT-related interruptions and stress and well-being in the workplace, factors influencing the effects of such interruptions on stress, and the costs and benefits of strategies aimed at managing ICT-related interruptions.

Written by **Roland J. Schuster**, **Ina Pircher** and **Karl Preßl**, the fifth article takes intervention research as the basis for an examination of the theoretical aspects of and prerequisites for group reflection as a communication tool, particularly in the context of project management. There is a special focus on participatory observation, which can be used to reveal group-dynamic processes, as well as an explanation of how an observation method can be implemented in teaching practice.

I wish you an interesting read and we look forward to receiving your feedback!



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Inhaltsverzeichnis

Beiträge	Seite
Creation and evolution of the cryptocurrency market <i>Dominguez Jurado, José Miguel / García Ruiz, Ricardo / Salem, Arman Sam</i>	7
Personal Bonds and Hedging Power: Using a Teaching Case to Reflect the Impact of Executive Decision-Making on the Wider System of an Organization <i>Jürgen Radel</i>	25
Age bias in recruitment decisions in Austria <i>Laura Dörfler</i>	53
ICT-related interruptions and work-related stress: a systematic literature review <i>Barbara Waldhauser</i>	67
Gruppenreflexion als Praxis des Projektmanagements <i>Roland J. Schuster / Ina Pircher / Karl Preßl</i>	79
Verzeichnis der AutorInnen	Seite
Verzeichnis der AutorInnen	109
Working Papers und Studien der Fachhochschule des BFI Wien	Seite
Working Papers und Studien der Fachhochschule des BFI Wien	113

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Domínguez Jurado, José Miguel / García Ruiz, Ricardo / Salem, Arman Sam

Creation and evolution of the cryptocurrency market

Abstract

In recent years, we have witnessed the creation and rapid expansion of a new set of digital or virtual currencies. These “cryptocurrencies” differ from traditional currencies in two ways: their method of creation, which is based in a computer process known as Blockchain, and their ability to operate without the control or oversight of a private entity or governmental organization.

The main objectives of this article are to explain the processes for the creation and operation of a cryptocurrency, processes quite different from those of traditional currencies (FIATC), as well as analyzing the evolution of this new market, particularly in terms of its capitalization, transactional ability, and ability to create new currencies, with a special emphasis on those cryptocurrencies that are in the highest demand (Bitcoin, Ethereum, etc.). The article closes with our main reflections regarding the boom in demand for these types of currencies, and their implications for the “Internet of Things” (IoT).

Keywords: Cryptocurrencies, Blockchain, Payment System, FIATC, Internet of Things – (IoT).

JEL: F31, E42, E51, C65

1. Introduction

The blockchain is a concept developed as a part of the core technology in Bitcoin, which is, in turn, the best known electronic money settlement system that operates through a distributed electronic system. The innovative concept has attracted much attention across several fields due to its diverse applicability. (Dorri et al. 2017; Yermack 2017; Mainelli/Milne 2016)

Bitcoin technology operates under the powerful assumption that any miner with the hard and soft resources to mine can do so and effectively become part of (or leave) the blockchain creation process at any temp point. Even with lower-value coins, the transaction settlement system without a centralized management agency has proven both effective and globally impactful.

The blockchain was originally introduced (Nakamoto 2008) as a mechanism to provide both safety and integrity for monetary transactions using Bitcoin. Through the use of electronic signature



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technology, blockchain allows for the safe, secure, and virtually guaranteed transfer of the ownership of both this currency and others from one node to another.

One of the main objectives of blockchain's technological system is to generate confidence amongst its users. Indeed, the manner in which it was conceived prevents the exercising of outsized control by any users or organizations. This differs from traditional currencies, whose confidence is linked to the support and/or implied intervention of an organization, state, central bank, or other entity in charge of its issuance and control. What traditional currencies seek to instill through intervention and support, cryptocurrencies seek to do through their secured blockchain technologies, keeping the issuance and control of the currency out of the hands of any designated body.

Owing to the blockchain, cryptocurrencies have experienced exponential growth over the last few years. Still relatively new, they have already become a field of operations for many traditional financial institutions and, at the same time, a growing concern for some governmental agencies. As these cryptocurrencies leave their traditional domains and become more integrated into daily trade, they will affect the real world economy more and more. As they are still little studied, it is currently rather uncertain what these effects will be in the future. (Europa Press 2016; Arce Martínez 2016; Yermack 2017; Liebenau/Elaluf-Calderwood 2016; Cuartas Micieces/Alejandro 2016; Guo/Liang 2016; Tapscott/Tapscott 2016)

After enduring a period of growth that was stifled due to a lack of confidence, the market for virtual currencies, led by Bitcoin, has gradually expanded and consolidated. The greatest expansion thus far occurred during the second half of 2017, when the total market capitalization of cryptocurrencies soared, pointing towards a certain bubble, which has begun to deflate since the beginning of 2018.

On the supply side, its simplicity – the fact that anyone can trade (or even create) a cryptocurrency – has led to a ballooning of total coins/tokens available, currently at a number north of 2,000 units. In this new network a large number of professionals (miners) operating the blockchain has been employed as well.

2. Fundamentals of Blockchain

The blockchain is a collectively created database whose historical components cannot be modified. It is created, disseminated, and accessed freely through a distributed network that lacks privileged branches or pathways.

This definition obscures the complex operation underway, one which grants the security guarantees necessary for reliable and acceptable actions. Its advantages are evident, especially with regards to data integrity and certification. The information stored in a block on the blockchain

cannot be changed (Lemieux 2016), which allows the technology to be of use in the fields of accreditation and legal security.

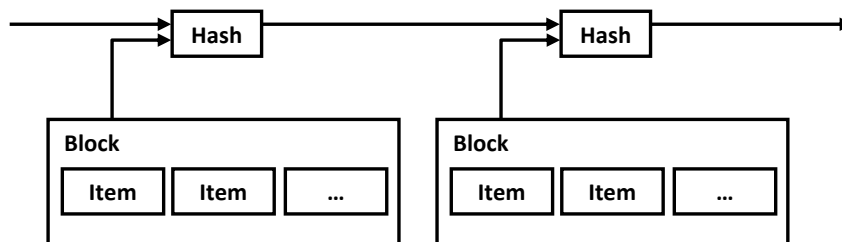
The creation process for a blockchain guarantees its security, integrity, and independence. Additionally, it generates employment for the “miners” who are remunerated for being in charge of the operations necessary to create and consolidate blocks.

The blockchain is defined as a “distributed database”, which highlights the following characteristics:

- Decentralized P2P¹ operations that operate without supervision from a central authority (CTIC 2017; Swan 2015). Each individual node has its own copy of the blockchain and contributes to its construction and maintenance.
- The database only admits additions in chronological order; it would be impossible to change or delete information after it was registered.
- It is a cryptographically certified registry, ensuring the consistency of all data recorded or stored, and validated by most of the network nodes (Nakamoto 2008). This feature allows the blockchain to serve as a certification of integrity for any transaction.

The blockchain is formed by blocks of information. In the case of cryptocurrencies, the valid transactions are mostly monetary. Each block is linked univocally in a chain. Each block also includes a **hash**² of the previous block that chains them together, maintaining both their consistency and uniqueness.

Figure 1: Workings of the blockchain



Source: Nakamoto 2008

Each block on the blockchain is made up of data records whose form and meaning are dependent on their application. For Bitcoin and other payment systems, each block can contain anywhere from 1,000 to 3,000 monetary transactions. Each block contains a header with its own checksum

1 P2P is the acronym for “peer to peer”, or a “peer to peer network”. This is where computers connect and communicate with each other without a central server, taking advantage of, optimizing, and managing the bandwidth of the network.

2 A checksum (hash) is a number that is calculated from the contents of the block such that it would be impossible to reconstruct the block from this sum of control (“unidirectional” function). Any intentional modification of any block would thus change the checksum in an unpredictable manner. For Bitcoin, this hash is composed of 256 bits, expressed with a 78-digit number. Two blocks containing independent contents would always have different checksums. The block’s checksum serves as its unique identifier.

and identifier of the previous block (which also had a checksum and identifier of the previous block, and so on). By traveling back through these checksums and identifiers, you can verify any block along the chain. The checksum of each block is verified every time it is accessed to detect any change in its contents after its initial construction. A modification of the block, including the header and checksum, implies the modification of its identifier (Stahr 2014).

2.1 Construction of a Blockchain

The creation process of a blockchain is open and competitive, conferring with its independence. Since the remuneration is only awarded to the first miner to validate and close the block, the competition is largely to be the first to finish each validation. By the nature of network work, it is open for anybody to compete.

The true originality and unique qualities of Bitcoin and its derived cryptocurrencies are their existence in an open P2P network, without a central server or privileged nodes. Permission is not needed to enter the network, and the software to access is freely accessible. Although there is a preferred distribution platform (GitHub), and software recommended by various agencies (Bitcoin.org 2011; Hartikka 2016; ethereum.org 2017), anyone can propose new software or use a different platform (Tormey 2017).

The three levels of the blockchain generation process could be explained as such:

- Dissemination of the writing between nodes (the operations are visible for all operators)
- Construction of the blocks
- Construction of the chain

In the first step, each newly created node enters the system through one of the existing nodes of the network, verifying its structure to be valid according to the entries already recorded. In the case of Bitcoin, the two main verifications are to ensure that: a) a balance equal to or greater than the amount to be paid exists in the senders account and b) that the author of the transaction is authorized to do so. If these conditions are met, the writing of the node is added to a local waitlist to be distributed to the local network. If the conditions are not met, the node is rejected.

Each type of annotation requires its own validation protocol, which defines the valid entries in the system. This protocol is executed in the successive stages of block construction and validation. Each system can contain a directory of validation protocols, each associated with a code at the top of each script, which allows annotations to be made in the same blockchain about transactions of various types.

Upon receipt of each message, the formal validity and legitimacy of its information are checked. The open nature of the network imposes a fundamental principle of security: that each node assumes that the rest of the system can be defective or fraudulent. The entire system is designed to be robust enough to function normally even under constant attack by highly skilled fraudsters.

After this, each invalid entry is rejected and each legitimate annotation, having been duly vetted and validated at each stage, is copied onto the distribution network.

In the second stage, the miners place their tickets on their local waitlist, organizing them in the manner that facilitates access to each individual ticket. Each miner works simultaneously, freely choosing which records to incorporate in each block under construction. The block is finished by adding a header with a checksum and an identifier of the previous block.

The computational cost of this operation is kept intentionally high. The checksum must meet very strict standards that require many computer resources, but whose validity (called "Proof of Work" PoW) can be easily verified by all nodes. This requirement limits individual mining (as opposed to cooperative group mining), as the calculation capacity is likely too low for the verification of blocks. (IBM Bluemix 2017)

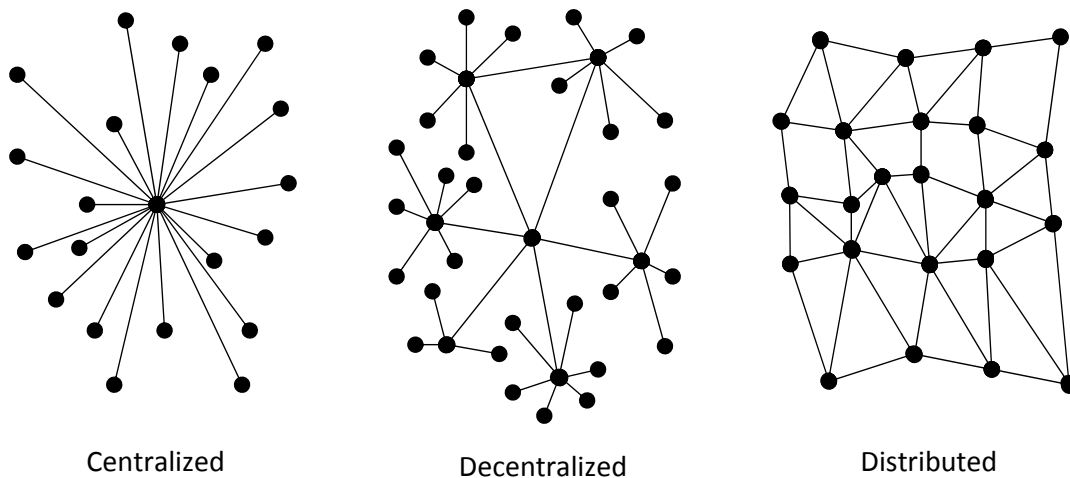
There is remuneration available as motivation for miners. In the case of mining for Bitcoin, the remuneration is done automatically by inserting a special transaction in the block that credits the miner with a number of Bitcoins previously created and reserved specifically for this purpose. When the miner finishes building his/her block, he/she transmits it to his neighbors, who check the validity of all entries before relaying it to all the nodes in the network. When the miner receives a new block, he or she will stop building the current block (as it will no longer be accepted) and begins to build another new block.

The construction of the chain. For each newly received block, each computer of a completed node executes a previously established protocol to either reject it (if it is invalid or not present in the contents of the local script), add it to the end of the local chain (after a final check of all entries in it), or put it on hold. Each block contains the identifier of its predecessor block in the blockchain of the miner who built it. This predecessor is the terminal block of the local chain, added pending a final verification of its validity. Should it not be verified, it will be held in a queue, becoming the end of a secondary branch of the blockchain. (Crosby 2016; Ateniese et al. 2017)

Unity and consistency. The various protocols used in the blockchain all incorporate some sort of consensus-driving mechanism. For example, with Bitcoin, the rule is that the main branch must always have had the most work done to it. The amount done is measured by a numerical value in the header of each block. If that numerical value is higher in the header of a secondary branch than it is in the header of the main branch, then the software will automatically make the necessary adjustments and validations so that this secondary branch becomes the new main branch, ensuring consistency. This process is critical to the chain itself.

All copies of the blockchain remain identical since the same entrance and validation rules apply. Each of the millions of entries created is registered in thousands of identical files on different, unalterable sites, and can be consulted free of charge. (Kehrli 2016; IBM Bluemix 2017)

Figure 2: Graphical differences between various networks.



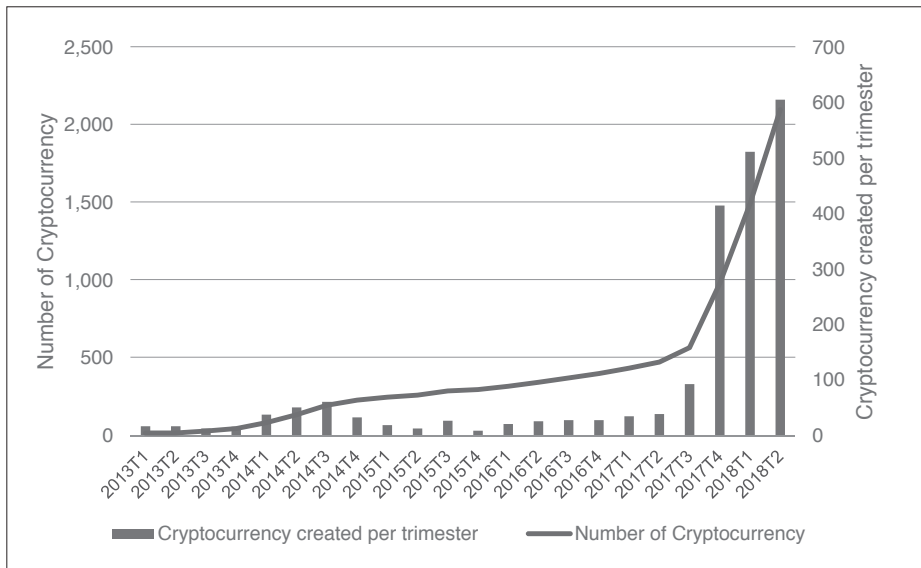
3. Cryptocurrency Markets

The creation of cryptocurrency markets has not been an easy path. From its first acceptance as a means of payment until the modern day, the market has gone through numerous moments of tension and uncertainty. As of the writing of this article (July 31, 2018), the total capitalization of cryptocurrency markets was USD 285 billion³ and even climbed as high as USD 850 billion at the end of last year, with a 24-hour transaction volume (a proxy for liquidity) exceeding USD 19 billion. The current number of crypto coins and tokens on the market is roughly 2,239.

Figure 3 shows the number of crypto coins and tokens available and the growth in their creation over time. Two large periods of creation stand out: one in 2014, moderate in size, and another that began in the fourth quarter of 2017, whose growth could only be characterized as exponential. Although a large number of coins and tokens currently exists (roughly 2,239, as of July 31, 2018), derivatives of the growing increase in Smart Contract technology (Buterin 2014; Narayanan/Miller 2013; Atzei/Bartoletti/Cimoli 2017; Omohundro/Steve 2014; Warren/Bandeali 2017), it must be recognized that even most of the cryptocurrencies depend on Bitcoin as a base value and market comparison.

³ Billion USD=10⁹ USD

Figure 3: Crypto coins and tokens created and existing per trimester



Source: Own elaboration based on www.coingecko.com

Table 1 presents the market share and 24-hour transaction volume of the main cryptocurrencies in the market. Bitcoin, the reference currency by way of its market capitalization, has a market share of 46.6%, followed by Ethereum (15.36%), Ripple (6.01%), Bitcoin Cash (4.66%), and EOS (2.31%). The five currencies account for 75% total market capitalization, shaping a very concentrated market with a Hirschman-Herfindahl index of 2,490. (McAuliffe 2015; Rhoades 1993)

Measuring by 24-hour transaction volume, Bitcoin holds the most market share with 25.45%, followed by Ethereum (8.29%), and EOS (4.57%). Transaction volume is less concentrated than market capitalization, with a Hirschman-Herfindahl index of 765.

Table 1: Major cryptocurrencies by market share of market capitalization and 24-hour transaction volume (as of 07/31/2018)

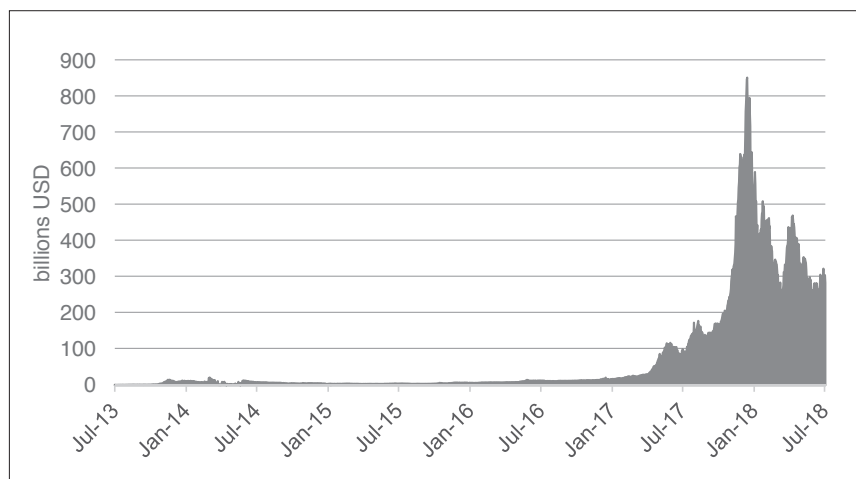
R	Crypto-currency	Market Cap.	Transactions 24h	R	Crypto-currency	Market Cap.	Transactions 24h
1	Bitcoin	46.60%	25.45%	11	Tron	0.79%	1.07%
2	Ethereum	15.36%	8.29%	12	Monero	0.70%	0.16%
3	Ripple	6.01%	1.21%	13	NEO	0.68%	0.54%
4	Bitcoin Cash	4.66%	3.25%	14	Dash	0.63%	1.49%
5	EOS	2.31%	4.57%	15	Eth. Classic	0.60%	1.37%
6	Stellar	1.85%	0.44%	16	NEM	0.51%	0.15%
7	Litecoin	1.59%	1.85%	17	Binance Coin	0.46%	0.31%
8	Cardano	1.57%	0.53%	18	VeChain	0.41%	0.15%
9	IOTA	0.91%	0.18%	19	Tezos	0.41%	0.02%
10	Tether	0.86%	0.01%	20	OKB	0.39%	0.31%

*Note: Tokens are highlighted grey

Source: Own elaboration based on www.coingecko.com

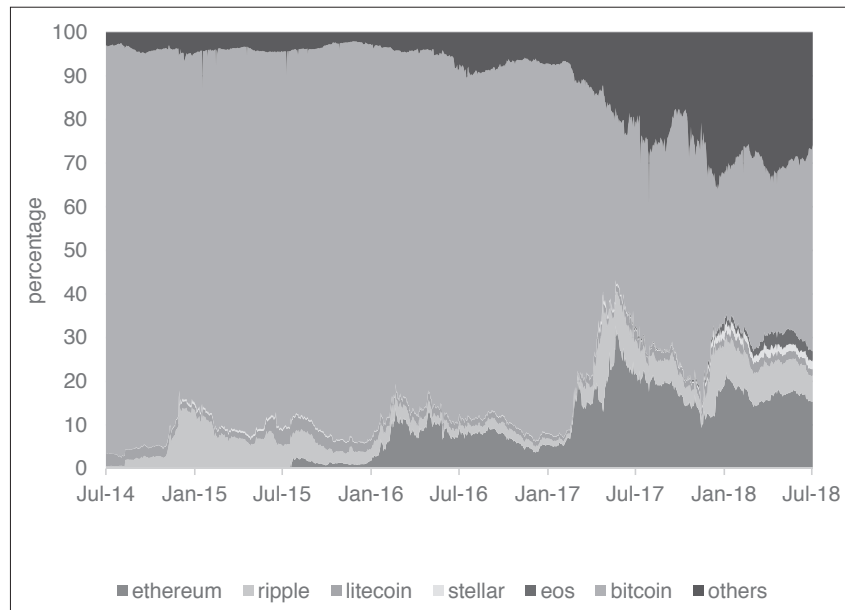
A time series analysis of the evolution of cryptocurrency markets (Figure 4) shows a slow growth in the market up until the first quarter of 2017. As of that time, we see a sharp increase, albeit two short cycles of instability. At the end of the year, the total market capitalization of cryptocurrencies reached its historic high, in excess of USD 850 billion. This run-up seems to have been speculative in nature, as the period from January 2018 onwards has marked a retraction to the values of October 2017. This process has been marked with two important upturns.

Figure 4: The Evolution of the total capitalization of the cryptocurrency market.



Source: Own elaboration based on www.coingecko.com

In terms of market dominance, Bitcoin again leads the pack, though it has been losing market share over time, as demonstrated in Figure 4. As late as February 2017, it controlled upwards of 90% of the market. From then on, however, a significant loss of market share occurred through today's market share of 40%. This decline can be attributed to both the appearance of new cryptocurrencies and the problems derived from the Bitcoin Cash and Bitcoin gold divisions. After a period of recovery until the end of last year, when market share reached 60%, a new decline began at the current rate of 46%.

Figure 5: Evolution of market share for the main cryptocurrencies.

Source: Own elaboration based on www.coingecko.com

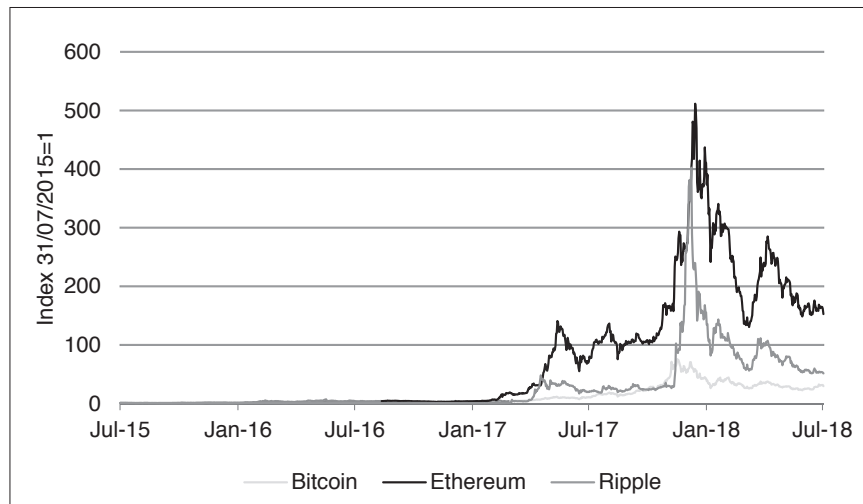
Litecoin was the first currency outside of bitcoin to attain significant market share, with up to 2.5% as early as July 2014. By September of that same year, Ripple had attained a similar market share, though its growth through November 2015 would lead it to eclipse Litecoin as the second most used cryptocurrency with a 10% market share. From then on, Ripple would begin a steady decline that brings it to today's ~1% market share.

Ethereum appeared in August 2015 and quickly expanded into the second most used cryptocurrency. By the first quarter of 2016, it had reached a market share of roughly 8% and, by 2017, had taken advantage of the growing cryptocurrency usage and split problems with Bitcoin to reach 30% market share. As seen in the graph, the market shares of Bitcoin and Ethereum would appear to have a negative correlation.

One of the incentives for the use of cryptocurrencies has been expectations and speculation regarding the growth in prices. For Bitcoin, arguably the most extreme case, the value had grown to USD 19,665 by December 16, 2017, before it proceeded to fall to USD 7,738 (at the time of this writing). In general, the variation in prices shows increases and decreases in purchases rather than general economic activity, so it is easy to notice the strong speculative pushes.

Figure 6 shows the evolution of the prices of the three main cryptocurrencies, expressed as indexed numbers to show the relative growth of prices. Firstly, it should be observed that the value of all three cryptocurrencies has increased markedly since March 2017. Secondly, the prices of these three currencies have fluctuated together, obtaining high and positive correlation coefficients (Bitcoin-Ethereum=0.9256, Ethereum-Ripple=0.9004, and Bitcoin-Ripple=0.8467). It is worth noting that, since July 31, 2015, Ethereum is the currency whose price has grown the most, seeing an increase of ~500x vs ~400x for Ripple and ~75x for Bitcoin.

Figure 6: Evolution in the prices of Bitcoin, Ethereum, and Ripple. Indexed Numbers, 1=07/31/2015.



Source: Own elaboration based on www.coingecko.com

Below, we will analyze the large cryptocurrencies of Bitcoin, Ethereum, and Ripple, alongside IOTA, a virtual currency with a special role in IoT (Internet of Things) transactions.

Bitcoin

Presently, Bitcoin is the best known and most highly used cryptocurrency. Before the appearance of Bitcoin, there were other electronic currencies, such as the technologies developed by David Chaum and Stefan Brands (electronic currency) (Chaum/Brands 1997; Brands/Chaum 1993), Adam Back (hashcash), Wei Dai (b-money), and Nick Szabo (bit-gold) (Back 2002). These currencies contributed to several concepts and technologies needed for the development of Bitcoin and similar cryptocurrencies (Molina 2017). The new currencies, in turn, often use Bitcoin's source code, changing and adding various elements to incorporate their own structure. These new sets of cryptocurrencies can be collectively referred to as "Altcoin". The set of over 160 coins currently includes Litecoin, Namecoin, Monacoin, Peercoin, Counterparty, and Ripple (Blockchain Luxembourg S.A. 2017).

Table 2: shows some important milestones in the development of the Bitcoin market:

Year	BTC: USD	Milestone
2010	400: 1	The first exchange of bitcoin occurs, stemming from voluntary transactions in "BizTalk". The exchange, which was for pizza, incorporated a rate of USD 25 for BTC 10,000. The exchange occurred on the server, "Mountain Gox".
2011	100: 1	WikiLeaks begins accepting donations and assistance in Bitcoin, though in small amounts. WikiLeaks needed the use of Bitcoin for their transactions. Mt. Gox was attacked by a hacker and its price in the market was blocked, resulting in a decrease of 99%
2012	1:33	Bitcoin begins to be used regularly at a rate of USD 10 per 1 BTC. Trades as high as USD 33 per 1 BTC occur.
2013	1: 1200	For the first time, the market capitalization of Bitcoin exceeds USD 1 billion. In April, the Winkle Voss twins, who famously battled Mark Zuckerberg over the origin of Facebook, predict that the price of the currency would grow 3000x in 10 years. At the end of November, 1 BTC begins to trade at a value in excess of USD 1,000 and, by early December, 1 BTC exceeds the price of 1 ounce of gold.
2014	1: 1000	Mt. Gox was the platform with the highest number of transaction exchanges. Again it was attacked by hackers and, in counter value, around 50,000 million USD disappeared. Due to this attack on Mt. Gox, Bitcoin suffered a slowdown in its price.
2017	1: 10000	In May, the price of 1 BTC exceeds USD 1,500. Then, it rises sharply to USD 5,000 by October, 10,000 in November, and 15,000 in December. Increased government regulation in China, its largest market at the time, is more than offset by increased activity in Japan, Korea, and the USA.

Ethereum

The main difference between Ethereum and other cryptocurrencies is that Ethereum is not just a coin, but rather a platform. Anyone can use Ethereum to take advantage of blockchain technology and build their own projects and DAPPs (decentralized applications) with intelligent contracts (Smart Contract). This is an important difference, as it shows the true scope of possibilities with Ethereum.

To clarify, if one would like to use the services provided by a Smart Contract that was developed for a particular DAPP, the token that was developed for that particular DAPP must be used (for example, Golem services must be paid for with the Golem Network Token, GNT). Although the tokens have a monetary value, they do not own any other right or privilege within the network.

So then, why do we need tokens other than Ether? This is because Ether is the central cryptocurrency, while every other token within the network is tied to the Smart Contract that it has developed and implemented.

Ripple

Ripple is a platform that was developed to solve the frequent problems of delays and costs of remittances in traditional international remittance systems. (Moreno-Sanchez 2016; Takashima 2018)

Ripple (XRP) currently holds the third largest market capitalization and, unlike Bitcoin-style currencies, actually does have a central organization, Ripple Labs, Inc, that supports it.

Traditionally, international remittances have been made through banks and remittance agencies in a manner that was slow and relatively costly. Ripple has sought to change that system by working in cooperation with financial institutions to make “quicker remittances with fewer commissions.”

Unlike other cryptocurrencies, Ripple uses a PoS algorithm (a consensus rest) rather than a PoW (Proof of Work) (Vasin y Co 2012; Siim 2017). In this manner, the creator of each new block is chosen depending on his wealth, or participation (stake) in the system. Additionally, monetary reward is given in the form of transaction commissions rather than the creation of a new block (hence why miners in PoS systems are called forgers). In this system, new coins are not awarded, and the number of coins created in the beginning always remains the same.

IOTA

IOTA is a virtual currency that is more properly suited to handle transactions in the IoT (Internet of Things). The objective of IOTA is to manage all aspects of the world in a non-centralized manner (Spurjeon/Sahu/Dutta 2018; Tennant 2017). IOTA was launched on November 25, 2015, with a market capitalization having reached 300 billion yen (USD 2.7 billion) by June 2018.

It is closely related to the below presented current daily uses of IoT, though it has the capacity to grow with future innovations of society. IOTA uses a unique technology called Tangle rather than chains of blocks. Tangle is a technology developed to optimize data communication and management between IoT devices. Communications that occur between IoT devices via Tangle utilize a small transaction fee (called a micropayment), allowing it to be a low-cost transmission system.

4. Conclusions

The technology linked to cryptocurrencies and tokens is in a phase of constant growth and evolution. These changes and improvements have developed in such a way that we can now use what was originally intended for Bitcoin or Ethereum to power small pieces of software, Smart Contracts, which allow us to replicate many real-world utility and service agreements in the virtual world.

The evolution does not stop here either. The continued implementation of blockchain technologies in IoT spaces could, perhaps, enable many routine management and oversight services to be accomplished through artificial intelligence, remotely, autonomously, and automatically through a chain of blocks.

The cryptocurrency markets have shown explosive growth in the volume of coins/tokens available, the market value of those coins, and in the number of daily transactions processed.

The growth of currencies available is both manageable and justified, given the lack of need for a central governing authority, as well as its simplicity of use and implementation.

The capitalization of the total cryptocurrency market began a period of exponential growth and incredible volatility from May 2017 onwards, accelerating rapidly towards its historical peak at the end of 2017, before experiencing a sharp decline in the first quarter of 2018 persisting through the second quarter. Behind this volatile behavior is the speculative process that substantially raised the price of all cryptocurrencies, especially Bitcoin.

Regarding the pricing of the individual tokens and coins, it is useful to review two facts. Firstly, that the prices of the major cryptocurrencies fluctuate together; that is, that their prices do not behave as substitute goods, but rather have a strong positive correlation. Still, it is worth noting that some of the smaller, lesser-known currencies have experienced a higher growth rate than their more prominent relatives.

Though Bitcoin prevails as the market leader, the emergence of peers built specifically to suit other needs of both real and virtual markets has led it to lose market share. We believe this trend will continue in the future. That fact, together with the algorithmic limit on the number of coins in circulation, leads us to believe that the most likely place for Bitcoin in the long-term future is as a reserve cryptocurrency (perhaps akin to “virtual gold”), where its price, though unpredictable, should generally see long-term increases.

With such a variety of currencies available, many people seeking to buy and hold a quantity of the currency do not know where to put their money. Though predicting their transactionality and which will raise or drop in value is no easy task, there are some indicators we can follow and questions we can ask ourselves to make for a more educated guess. These include:

- Current market capitalization
- Specific use
- Length of or limitations on new issuance

The coins and tokens whose value we will see a rise in the future are likely to be those with ample exposure to the overall market. As capitalization grows, new coins and tokens are likely to be issued in order to match demand. The dilution from new issuances should, however, be more than offset by the rise in demand necessitating the added coins/tokens. As such, when choosing a cryptocurrency, it is important to choose one with ample exposure to and the ability to take full advantage of increases in the overall market.

It is also important to study the specific use of each virtual currency. Generally, the specific purpose will be stated clearly in the initial specifications of the currency. For example, fluctuations in the rates of the major cryptocurrencies bode well for those who are better positioned to take on the challenge of remittances.

This is because the fluctuation system does not involve banks, leading to a reduction of costs on the frontiers of exchange rates and remittances. Because settlements through blockchain are relatively cheap and only take a few seconds to complete, many countries and companies have adopted them.

Outside of these advantages, what has garnered the most attention in the cryptocurrency markets have been the fluctuations in market capitalizations and per coin/token values. The more people, countries, and companies are attracted to use cryptocurrencies, the higher the market capitalization will rise.

Table 3: Cryptocurrencies: Characteristics

Name	Code	Characteristics
Ethereum	ETH	Permits the creation of intelligent contracts between pairs, based on blockchain models.
Ripple	XRP	Specialized for payment and transaction settlement functions, especially in banking systems
Bitcoin Cash	BCH	Intended as a more liquid and accessible version of Bitcoin, with an 8 MB capacity vs the 1 MB of Bitcoin
Litecoin	LTC	A lower-profile currency for lightweight deployments
NEM	XEM	A social cryptocurrency model
QASH	QASH	The currency used by LIQUID, a project of QUOINE, an important company in the field of exchanges

Finally, it's important to remember how many units of each cryptocurrency will be produced. Some virtual currencies have an upper limit on the amount of issuances, whether structurally (algorithmic) or otherwise, whereas others have no such limit. Because new issuances will likely increase the availability and utility of the currency, and because excess demand is likely to more than offset the dilution from these new issuances, it can be said that currencies without pre-established limits will be more likely to rise in the future than those who have limits, however high they may be.

On the other hand, the block-closing process is quite competitive, with miners competing at every point to close and add a block to the chain. In simple terms, the transactions (contracts) are grouped in each block unit of a certain size, then sealed and added to the last block that exists at the moment. By repeating this, the blocks, really just collections of transactions, are connected from the front and from the back and grouped together in chronological order as part of a chain (hence, blockchain). The data in the blockchain is not collected in any one place, but rather has the same data stored in all distributed computer networks.

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Jürgen Radel

Personal Bonds and Hedging Power: Using a Teaching Case to Reflect the Impact of Executive Decision-Making on the Wider System of an Organization



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Abstract

Using cases can be one strategy to increase the reflective capabilities of learners in situations that are ambiguous. Based on a concrete situation, learners have to come up with proposals for decisions and discuss possible actions. By doing this, general knowledge can be gained and applied to other, similar situations. The following article presents and reflects a situation where several members of the leadership team of an organization are involved in a conflict, due to a process violation. This case is used to illustrate how a specific case can be discussed in a teaching session.

To illustrate the combination of joint exploration and normative teaching with the case, this article is divided into three parts: (1) A brief introduction into the didactic concept of teaching with cases, (2) the case itself, as it can be distributed to the learners and (3) an abbreviated version of a teaching note with comments about the case, how to teach it and how to explore the issues with the participants.

Keywords: Harvard Case Method, micro-politics, decision-making, teaching and didactics

1. A Brief introduction into the Didactic Concept of Teaching with Cases

Teaching with cases is a concept that seems to be widespread in Anglo-American oriented business schools (e.g. Badger 2010; Desiraju/Gopinath 2001: 394). It “[...] has been closely identified with the Harvard Business School [...]” (Barnes/Christensen/Hansen 1994: 34) and the method of case teaching seems to have originated there (Forman/Rymer 1999: 373). It is sometimes called the Harvard Case Method (Schuster/Radel 2018: 280), while its roots can be traced back to the 1800s where the method had been used in psychology, sociology and medicine (Naumes/Naumes 2006: 4), before it originated in law schools in the form we see today (Desiraju/Gopinath 2001: 395), as a way to learn by example.

This approach, i.e., to use storytelling (Barter/Tregidga 2014) based on a situation that is as realistic as possible (Naumes/Naumes 2006: 9), seems to be the underlying idea when a case is used as an element in socratic teaching “[...], in which students carry the discussion through answers to a stream of questions.” (Ellet 2007: 5), while the case teacher – in the best case – only supports and structures the discussion when necessary, but preferably with a very limited interference in the group discussion.

A vivid, self-directed discussion of a group of students might be the preferred way of teaching, when students are excited about the topic. Desiraju and Gopinath consider a case a possible way to achieve this and to address the problem of little emotional involvement in the subject material (2001: 394). Case teachers usually hope for self-directed discussions. But the reality is often different, especially when students are not often exposed to the case method. In contrast to Desiraju and Gopinath, students might sometimes even be emotionally detached from the case (Radel 2016) – either because they struggle with the protagonist or his role, the situation or task, or even with the industrial field or company. Issues that are difficult to avoid especially in a class with diverse backgrounds. One case teacher commented on that issue, that he only teaches cases that take place in “hot companies” that is “Per definition a company that would hire our students” (Radel 2015a). Another way to increase engagement with the case is to use different case formats, like video cases (Schuster 2015; Radel 2016), a concept that is not discussed here in depth, because the traditional cases or Harvard cases are mostly the didactic method of choice, simply because they are widely available and comparably well established, as described above. Another advantage of Harvard cases is the structure that is provided by the teaching note that usually comes with most cases as a supplement for the case teacher.

Before an excerpt from a teaching note is presented in chapter 3, based on a case study (chapter 2.1), different types of cases will be discussed. A deeper introduction into the case method and its aims will not be given here, but can be found in Heath (2015: 9ff.), Ellet (2007: 5ff.) and for a very broad overview in Barnes, Christensen and Hansen (1994). The challenge for a case teacher to manage content, process and the interaction between teacher and student is discussed in Schuster and Radel (2018: 290ff.).

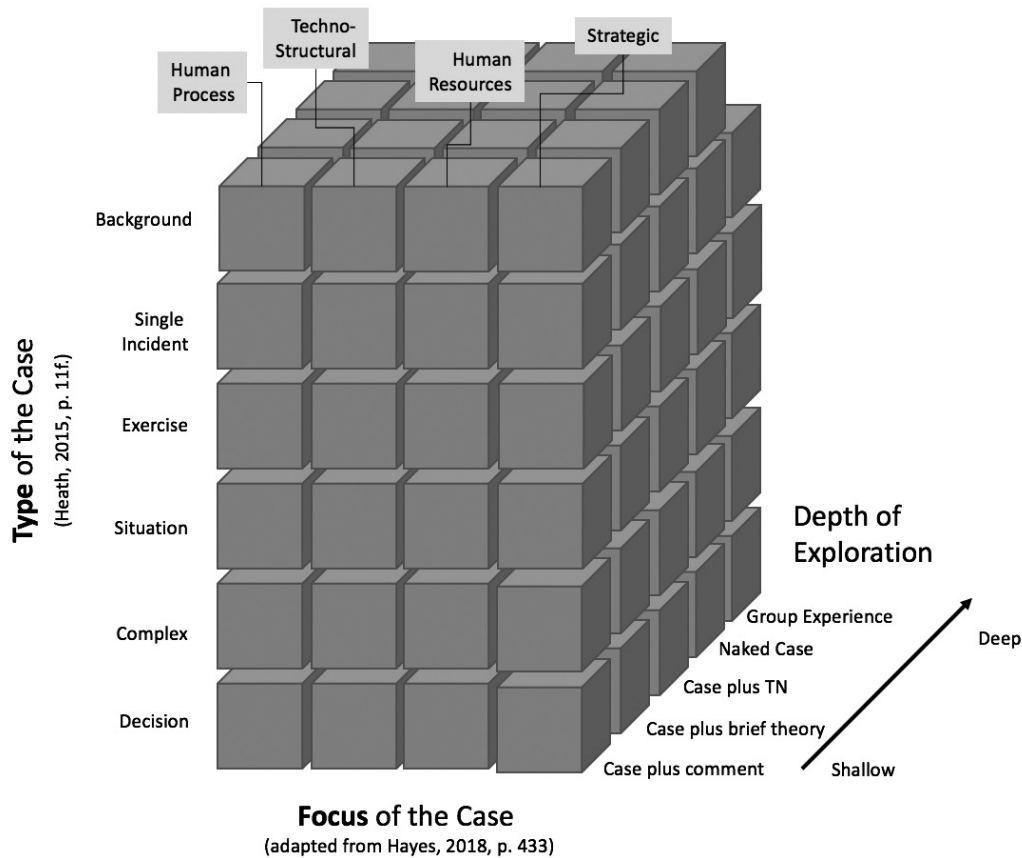
1.1 Selecting and teaching cases

As mentioned above, a case can be understood in a very broad way. Levy, with a reference to other authors, even argues that so far “[...] no consensus has emerged as to the proper definition, either of a case or a case study” (Ragin/Becker 1992; Gerring 2007: chapter 2, in Levy 2008: 2). Overall a case study can be described as a story, a narrative that helps us to understand the world around us or organizations (Barter/Tregidga 2014: 5). Based on the discussion with a case teacher (Radel 2013), everything can be a case as long as it is possible to discuss the relevant matter. Heskett (2008) remembers a story a Kindergarten teacher told him:

“[...] [she] once told me that she used what she regards as the case method every time she holds up Mary’s or Johnny’s drawing in art class and asks her class to tell her what they see going on in the drawing.”

However, the approach that Heskett describes might be considered a bit too unstructured for case teacher who are used to teach in a normative system. In such a case, there are at least three dimensions that should be considered and might be perceived as helpful, when a case is selected and taught (Figure 1).

Figure 1: Dimensions of case selection and teaching



Usually cases fall in one of the areas below, most of the time with an industry or organizational background:

- **Armchair / Fictional** cases that are designed specifically to illustrate a concept. Usually such cases are not very much recommended and students sometimes ‘feel’ that the situation is not ‘real’. However, there are some fictional cases that are extremely successful, based on students’ feedback or have won a prize in a case competition.
- **Analytic cases** that are used in accounting or related disciplines with the learning objective to build a strategy map and balanced scorecard (Kaplan 2006) or to analyze a company’s performance, forecasting of funds that are needed in a period of time or illustrating cash flow patterns in a specific industry (Kester 1996).
- **Video cases** (Radel 2016) are similar to text-based cases, with the aim to lead to a higher emotional attachment to the topic. The makeover episode of (any) Austrian (American or German) Next Top Model season might be used to illustrate resistance to change, group dynamics or performance issues.

- **Text-based cases** that often deal with management dilemmas are probably the most common way to teach with cases. They might be fictional sometimes, but the vast majority of them seem to be based on real situations. The Case Centre differentiates its collection by cases based on published sources, field research, and generalized experience. In the latter category 47 cases can be found that were prize winners. Compared to field research (735 prize winners) and published sources (401 prize winners), field research cases seem to be more highly valued than the other categories (data retrieved on August 3rd, 2018).

The simplified list of cases above is not to be understood in an exclusive way, and several other typologies can be found (Levy 2008: 3ff.). Simulations (e.g. Crawford 2017), as a very specific form of cases, are not covered here but might provide another valuable source of learning. Different types of cases or approaches of cases can be combined and complement each other. Text cases can be fictional and video cases can show a real-world problem, like the documentary *Smartest Guys in the Room*, that is suited to raise ethical issues and can be complemented by various text-based cases (e.g. Moffett 2004 or Hamilton/Francis 2004). However, in this article, the focus is on a management case or management dilemma case. Case studies as a research method (e.g. Zainal 2007; Edwards 1998 or Rohlfing 2012) are explicitly not covered, due to the different goal compared to teaching cases.

Within these management or management dilemma cases, no matter what their data source might be, different levels of cases become apparent that support a different type of teaching and learning:

1. Case plus comment
2. Case plus brief theory
3. Case plus Teaching Note
4. Case discussion (naked case)
5. Group experience

The teacher's relation to students and intention how to work in the classroom setting might be different and has an influence on the level above that is recommended for teaching (see Schuster/Radel 2018: 287f.):

During a "[...] *participative presentation*; a teacher facilitates communication about something where he or she possesses an expertise. The whole audience (students) is included more or less actively. [...] [To increase] [*p*] *participative motivation*; the teacher facilitates action which includes everybody; all the students are an active part of the happening. The power of groups is used to fuel the process. The teacher alone steers the process by primarily using his or her professional and/or institutional authority. [...] [During] [*s*] *selective exploration*; students volunteer to experience self-awareness or enlarging their behavioral repertory, i.e. the rest of the audience observes, the teacher facilitates. Using the (Harvard) case method, the teacher

might present a case and ask students to slip voluntarily into the roles and play sequences from the case.”

Depending on the preferred style of teaching and learning one of the above mentioned and in the following briefly described, a case and its complements can be selected consciously.

Cases plus comment (e.g. Case 2001) provide the learner with the situation and with a pre-defined analysis of experts. Due to this, a very inexperienced learner might be able to draw conclusions based on the analysis of the experts. The challenge for the learner is to decide for a position, based on the presented reflection of experts. The case teacher is in a very comfortable (comfort zone) situation where he or she only has to discuss the pre-defined statements. A high risk might be that the learner adapts one of the pre-defined suggestions. On the other hand, this type of case might be extremely valuable either in inexperienced classes or to introduce the method.

Cases plus brief theory or cases plus teaching note, that might include theory, help the learner, as well as the teacher, to focus on specific aspects that are relevant in the case. Theory is sometimes perceived as a very valuable addition to what seems to be ‘a philosophic discussion’ for students (and some teacher). Theory helps to provide structured content in what seems to be an unstructured discussion. Usually theory may accompany a case and has to be read in advance. Sometimes theory input might be used within or after a case discussion to illustrate specific concepts that were too broadly discussed in the case before.

The **case discussion** (naked case) can be conducted semi-naked (the teacher offers questions that the students should keep in mind when reading the case) or naked (the teacher asks the students to read the case and make up their minds about what the question might be). This might be ‘the purest form’ of the case concept, but also a very difficult one that challenges both, students and the teacher. However, the area that the case covers and due to this, the dynamics that the teacher has to deal with is quite limited, but it might lead to stress for both sides.

The most open situation might be the **group experience**, or experience-centered teaching approaches (ECTA), that are discussed extensively, in relation to the role of a teacher in Schuster and Radel (2018). In such cases, the situation as it happens in the “here and now” is the basis for the reflection.

Another question that should be considered is the curriculum, in which a course is taught and how a specific case can be used to support learning within the course. Binsted (1980: 26) describes a learning matrix (Table 1) for management-learning events that can also be used to select the appropriate case and mode of delivery to achieve a desired outcome.

Table 1: A learning matrix

		Outcome		
		Cognitive	Skill	Affective
Process	Reception of Input	<i>Hearing, reading about knowledge, etc.</i> Possible cases: background or single incident case. Depth of exploration: Case plus comment or plus brief theory	<i>Watching demonstrations or being told of methodology.</i> Possible cases: Background case. Depth of exploration: Case plus comment or plus brief theory	<i>Receiving emotional data about self.</i> Possible cases: Complex and decision case. Depth of exploration: Case plus TN or naked case. Mention here-and-now events as they happen in the classroom, during the discussion and help the students to understand what is going on, using theory to explain what happens – when appropriate.
	Discovery	<i>Perceiving the consequences of activities.</i> Possible cases: Single incident, exercise or situational case. Depth of exploration: Case plus TN	<i>Acting and experiencing results.</i> Possible cases: Single incident, exercise or situational case. Depth of exploration: Case plus TN, including practice sessions to apply specific tools or theory. Provide feedback.	<i>Experiencing feelings, etc. as a result of activity.</i> Possible cases: Complex and decision cases (simulations) Depth of exploration: Mention here-and-now events as they happen in the classroom, during the discussion and help the students to understand what is going on, using theory to explain what happens – when appropriate.
	Reflection	Extracting new meaning, conceptualizing, changing constructs. Possible cases: Complex or decision case. Depth of exploration: Case plus TN or naked Case	<i>Valuing, choosing, integrating, gaining confidence.</i> Possible cases: complex or decision case. Depth of exploration: Case plus TN or naked Case. Prefer peer feedback over teacher feedback.	<i>Getting in touch with feelings, changing.</i> Possible cases: Complex and decision cases (simulations) Depth of exploration: Group experience

Source: adapted from Binsted 1980: 26, Table III

Whatever case type might be used by a teacher to meet specific student needs, the format of teaching with cases seems to be very open, discussion-based, at first sight but there seems to be a tension between explorative openness and the normative framework of a specific case, provided and increased by the teaching note (TN). The TN can be supportive, as well as limiting but is a key element of case teaching. Before some aspects of the case are discussed in the TN (chapter 3), the case itself will be presented in a way it can be distributed to the students before or in the class – two options that will be discussed later in this article.

2. Case Study

The following case was prepared solely as a basis for class discussion rather than as an illustration of either effective or ineffective handling of a business situation. It is not intended to serve as an endorsement or a source of primary data. While the case is based on a real situation, all names, places, genders, the industry, and some peripheral facts might have been disguised.

After the presentation of the case it will be reflected in chapter 3 (The Teaching Note (TN)). Due to this it is highly recommended to read the case first. Within the case, there are two layers of problems. One that is very obvious: compliance and process violations by a local head of Human Resources (HR). The other issue that might be discussed is the position of Peter, the global head of HR and his (power) relation to Lisa, the local head. Peter has to decide what to do with the situation. His possible options will be reflected in chapter 3.4.

2.1 Compliance in HR – The Beloved Husband

Peter, the global head of HR at “Gernold Wender & Sohn GmbH & Co. KG” (GWS), a family-owned, Germany-based company, was really surprised, reading the email he had received from the U.S. subsidiary, GWS LLC, during the night (see **Appendix 1: Brian’s email to Peter**). It seemed as if he had a “situation” in the Oklahoma-based production facility. Lisa, the local head of HR, had stashed away an internal application. Afterwards she concealed the legitimate complaint of an employee who had been forbidden to apply on an internal position. The one who had forbidden it was his boss Markus, the VP of Innovation and Head of Production – Lisa’s husband. Now the position had been filled by someone external.

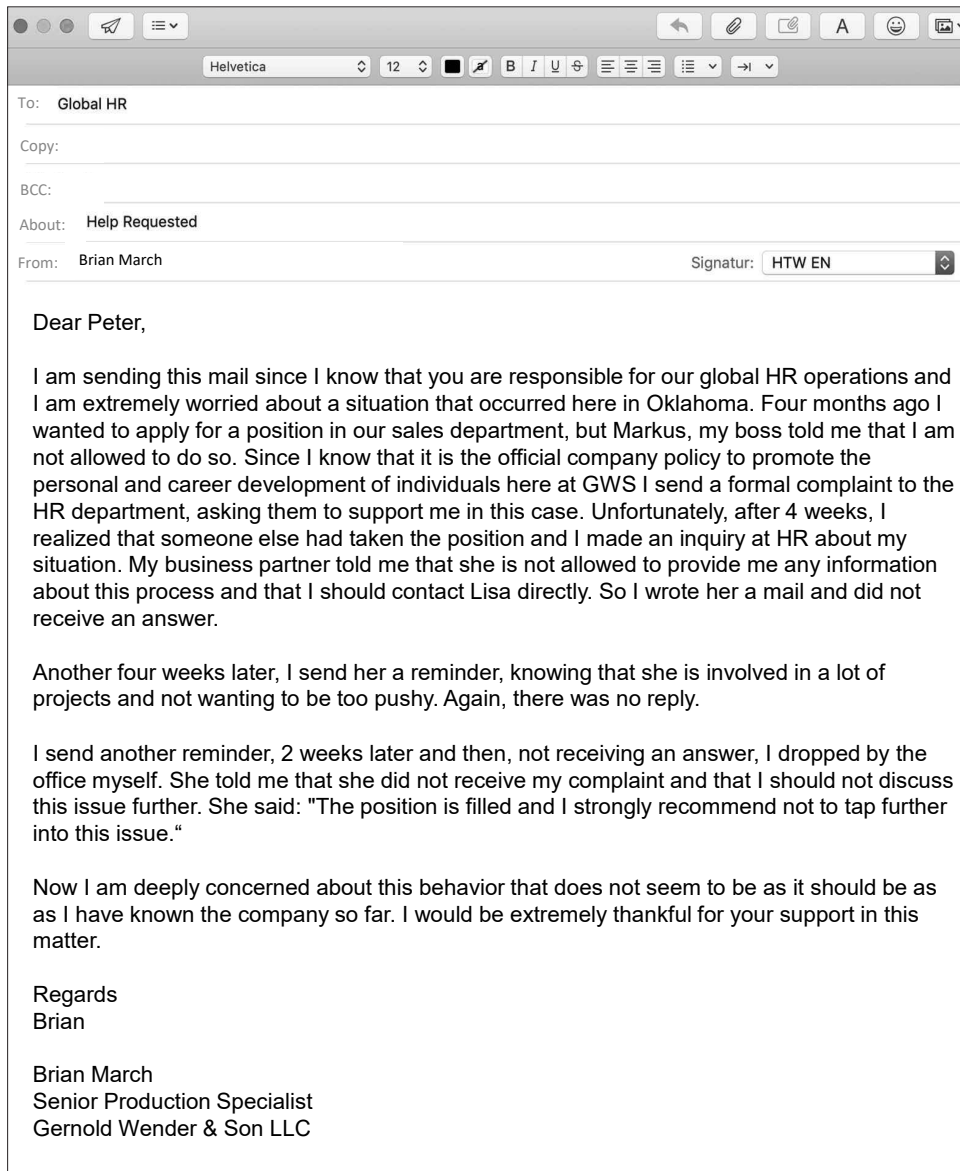
Lisa has been overseeing the U.S. based HR activities of the constantly growing GWS LLC for more than 12 years now. Contrary to a lot of other employees at that time, she had relocated from New York to Stillwater, Oklahoma, when the company decided to build a new production and logistics facility over there. The reason for this specific place had been the acquisition of another company in Stillwater. Synergies seemed extremely promising and due to the merger, the number of employees in the U.S. had instantly risen from 165 to more than 900, leaving the U.S. on position two, regarding the number of employees. The total number of employees at GWS had risen to 3,700 worldwide. During the growth of the company Lisa showed outstanding performance. Her last successful project had been the integration of the new company. A process that went as smoothly as possible, even if Lisa struggled herself. Usually she was a hands-on personality who now had to implement processes.

Long before the relocation of the whole organization, the first expatriates were sent to the office in New York and Lisa met Markus, her present husband, during the relocation process she personally oversaw. Markus had been the first expat and was now overseeing key areas of the company in Stillwater. After a couple of years, he applied for a green-card and married Lisa 4 years ago.

The harmonious relationship between both had sometimes contrasted with the troubled relationship between Lisa and the German HR department. She always saw herself as being extremely independent, having a hard time to accept being “no. 2”. In several situations, she was hesitant to implement global standards that were set by headquarters and that seem to be more and more important because of the constant growth of the company. She also had a hard time to accept that she had to report HR metrics to Germany. This might have been due to the perceived ‘im-balance in importance’ as she once commented sarcastically: For a couple of years, she had more responsibility – in terms of the employees she oversaw – than the global head of HR as all other individual production sites were smaller than the U.S.-based one. Only the global sum of employees led to the fact that the global head of HR had more people to oversee. A subtle distinction, but a distinction that Lisa did make. This led to a constant struggle between HR at the headquarter and her. However, the global head of HR had been replaced six months ago and Peter, a former HR team lead, took his position, knowing Lisa quite well from a couple of projects they were involved in together.

During these times he saw her as being at the same hierarchical level and he always found it pleasant to work with her. He even enjoyed the time in Oklahoma very much, to be honest. From a technical perspective it made sense for him to be assigned to these projects; his English was very good, he liked to travel, to be internationally exposed – all in stark contrast to his former boss. Additionally, Peter and Lisa were a great personal match. They were at the same age, in their mid-forties, no kids, both loving a high standard of living and to have a professional relationship but also a good time. Lisa had always been a very generous host. She invited him and her whole core team of five business partners during his visits, stretching the companies expense reports in the finest steak houses and bars quite often, but never that far that it would be “officially” considered as non-compliant. But now, after reading the email again, and having talked to the involved parties via phone, it seemed as if she had crossed a line. Peter was wondering what to do now, technically being her boss.

Appendix 1: Brian's email to Peter



3. The Teaching Note (TN)

As mentioned above, the teaching note that is presented here relates to the specific case above (see chapter 2.1 Compliance in HR – The Beloved Husband) and is an abbreviated version of the original teaching note that accompanies the case above. Additional information about teaching notes in general and their pros and cons can be found in Schuster and Radel (2016: 281ff.). The aim of this chapter is to provide the reader with a hands-on idea on how to teach the case in regard to learning objectives:

1. After the discussion, students should be able to differentiate between a technical process perspective of a project (the implementation of a CRM system in this case) and a wider, personal context (the roles of the consultant and the head of sales).

2. Students are able to formulate and categorize issues in the given case and propose potential solutions for different actors in the case.
3. Additionally, they will be able to compare the elements of the case discussion with their own situation at work, predict potential outcomes of the observed conflicts and select appropriate actions to avoid a negative impact.
4. They will be able to discuss Foucault's concept of punishment and assess it as a potential tool to restore power of the authority.

5. Role theory can be illustrated and compared to real-life situations, outside of the classroom.
6. Actions for the development of individuals can be implemented and actions for the development of an organization can be designed.

The learning objectives above might insinuate, that the case is a 'perfect fit' to reach those objectives. However, other cases might equally be suitable to reach these objectives. Also, other objectives might be defined by other case teachers who see a potential fit between their curriculum design and the presented case.

In addition, all information that is given here about the case, it is important to note that all aspects in this teaching note are very likely to be incomplete and should be seen as *suggestions* that the author as a case teacher provides.

A TN, no matter how comprehensive it might be, it should not be seen as a definite overview or presentation of the final flow of the discussion process. The process of a case discussion is a vis-à-vis situation of a large group of people (typically between 30 and 50). Due to this, it is a very complex interaction and

“[...] relations with others in the face-to-face situation are highly flexible. Put negatively, it is comparatively difficult to impose rigid patterns upon face-to-face interaction. Whatever patterns are introduced will be continuously modified through the exceedingly variegated and subtle interchange of subjective meanings that goes on.” (Berger/Luckmann, 1966: 44).

A single case might be taught from different angles. The case does not belong to the author alone, once it is taught, but it belongs to each teacher and even to the students of each session, because all of them make the case discussion somewhat unique, even if the structure that is described in this chapter might limit the interpretations. Positively speaking, it puts a focus on a discussion that would otherwise become too broad, which is important, due to the fact that case sessions are short impulses, which require good anticipation of potential processes of discussion.

Each case teacher adds interpretations and stresses different aspects of a case, based on his or her personal and professional experience or background. Overall, several aspects contribute to successful learning (Hattie 2009: 31ff.):

- Students as learners and as a peer group,
- Home environment of the students,
- University as an organization,
- Case teacher and teaching approaches,
- Curricular design where the course is taught and within which the case is taught.

A TN should be considered as an incomplete and evolving document. Every time a new aspect is raised it can be included as a potential addition in the TN. This is extremely helpful, especially when the case has just been written. It is recommended to keep a case file, where comments to the case are added each time it is taught.

Because of this, this chapter is partly written from the “I” perspective (of the author), providing suggestions to “you” (the reader).

3.1 Target Audience and Teaching Approach

The case is especially well suited for HR classes that have to deal with compliance, internal development, culture, change management and international HR management. So far it has been taught at MBA and Master levels within Leadership and Change Management classes. It is helpful when the participants are used to the case method, but not necessary. In addition to these recommendations on where and how to embed the case in a given course, additional suggestions depend entirely on the individual design of a course and the preference of the case teacher. This fit can be evaluated after the application and then be changed in the next class.

The problem that is described in the case is not too complex at first sight but there are ethical and power aspects involved which might make the decision a bit tougher and the discussion richer.

The case can be considered a compact case, because of its length, and it can easily be taught during a 45 up to a 90-minute class. It is recommended to teach it during a 45-minute session. Case discussions that take longer are sometimes considered boring and stressful by those students who are emotionally not very much involved.

Teaching the case in a 45-minute session requires the students to read the case before class. While it is possible and very beneficial to read it together during a 90-minute class. The latter has the advantage that students all know the case and can participate in the discussion. Letting students read the case before leads to a high number of non-compliant students and they might be silent during the discussion. One way to avoid this is a pre-class questionnaire.

3.1.1 Pre-Class Questionnaire

To encourage students to read the case, I would like to follow a recommendation from Pierre Chandon from INSEAD. During a case workshop he introduced the idea to create a questionnaire before class and to use it to come back to specific people and comments at the start. This will save time and the discussion will be a lot more structured from the beginning. The following questions seem to be quite suitable for the pre-class questionnaire:

- What would you do now if you were Peter?

Afterwards include a text-box to elaborate on the decision and some additional information:

- Please elaborate on your decision above: What are the reasons / facts that you base your decision on? Be as specific as possible and be prepared to discuss your personal point of view in class. If you are not sure, what kind of information do you need to make a decision?

Before the next class, print the decisions and statements with the names of the individual students (keep in mind to ask about the name in the questionnaire). Start with the “worst” comment (without saying so) and ask the student to elaborate on his or her decision. Then guide the discussion towards the better comments or the desired outcome, if such exists from your point of view.

The author works with moodle to create the questionnaire and to download the results, but a spreadsheet in Google Docs will be also fine if you, your students and your organization feel comfortable with the data protection issues that might come up.

If the students have to read the case prior to the class and you do not use the questionnaire that is described above, I would recommend providing the students with a very brief overview of the case. This will help to “onboard” those who haven’t read the case. The downside of this approach of introducing a case is that the students will “learn” that you onboard them and then they will probably rely on that support – not reading the cases at all.

However, the case is extremely short, so it is also possible to read it in class without losing too much time. Be aware that this is also dependent on the English literacy of the class.

3.2 Using the Case during a 90-minute and a 45-Minute Session

The more time that is dedicated to this case, the more the pros and cons for Peter’s options (see board plan section) can be discussed. Sometimes the pro/con discussion seems a bit too long for those students who cannot really “connect” with the protagonist. A problem that cannot be completely avoided from my point of view.

If you are “stuck” between the 45 and 90 minutes and/or do not want to discuss the pros and cons too much, you can complement the case by discussing the “Drawbridge Drama” first (“who messed it up?”). If you do so it might happen, that the students instantly come up with the statement “that everybody messed it up” – my preferred wrap-up from the Drawbridge Drama. If this happened, try to ask more specifically “why”, which might start a discussion. If someone comes up with the statement above, I usually try to “ignore” this comment and ask for further comments. There are many more ways to analyze the Drawbridge case and I strongly recommend using the ESMT case and teaching note (Reference no. ESMT-710-0104-1 and ESMT-710-0104-8).

In addition to a second case, the session can be complemented by a brief theoretical input about Foucault’s thoughts on punishment and power, as well as about role theory (see chapter 3.9).

To start the discussion, **trigger questions** are being used. Possible trigger questions you can ask the class can be:

- If you were Peter, what would you do, if anything? (if you have not asked that for the preparation). This question leads to a very specific discussion about options. It might be too early to jump to conclusions, except if this is your plan for the session. Doing this will shorten the time of the discussion and avoid that the students reflect the case to a very high degree.
- What is going on here? As a very broad question to see whether they can see the second, more personal layer, the conflict between Lisa and Peter and Peter’s struggle for power.
- Who would fire Lisa? This is a very provocative question that startles the group a bit and leads to some excitement. You can make a quick poll and then lead the group back to the questions why, why not? And: what are other options, Peter has?

It is highly recommended to create a board plan for the session that serves like an agenda for yourself, helping you as a case teacher to structure the session.

A board plan is created to mirror the black- or whiteboard that you have available in the classroom and where you take notes of the students’ comments while they discuss a specific aspect that is written down in one of the quadrants of the plan below. The numbers in the plan are the sequence in which the questions are discussed. The quadrants are the suggested areas of the blackboard where you can write the comments of the students down.

In the next section, some aspects of the analysis of the case will be presented. This analysis should be similar to what the students analyze in class, facilitated by the teacher. If the case teacher experiences new aspects – which is not unlikely to happen, especially when it is a case that is new or has been written recently, such comments are included in the analysis, making the teaching note a living and evolving document.

3.3 Analysis: What Are the Issues in the Case?

At first sight, the issue in the case is not too complex, but at a broader level it can turn into a lively discussion about roles and power in organizations. Peter has to hedge his power in two dimensions: towards Lisa and towards the organization. If he makes the ‘wrong’ decision, his relationship to Lisa might get harmed, his standing in the organization might get harmed, and he might weaken his position.

Besides Peter and Lisa, the case seems to illustrate an issue between Brian and his boss, but it is also an issue between Brian and the local HR, between local and global HR, impersonated by Lisa and Peter and an issue between Peter and the people in the organization, even between Peter and the values of the organization.

Now Peter has the problem to make a ‘correct’ and ethical decision that is influenced by organizational factors (Jones 1991: 390f.) and his ethical assessment of the situation (Jones 1991). This decision is influenced by the close, primary relationship (Sanders 1970: 21; Cooley 1909: 23-31.) to Lisa and the issue of reinforcing his own role (Van Sell/Brief/Schuler 1981; Krappmann 2016). These theoretical aspects will be briefly discussed after the presentation and assessment of Peter's options.

During the session with the students, the following issues and thoughts can be collected on the board as keywords:

Key Issues

- An internal application had been stopped by the VP of innovation.
- The employee complained but Lisa, the local head of HR covered the VP - her husband.
- This is a compliance issue and process violation.
- The global head of HR has to decide how to handle the situation from a technical and a personal perspective, while he and Lisa seem to struggle with their roles (Lisa in a different corporate setting: now more structured and process oriented, Peter in a recently acquired, higher position than before).

Other Issues / questions and thoughts

- Lisa had a good track record and showed commitment to the company during the last few years, while others did not, which might make the decision to fire her harder.

- On the other hand, it seems hard for her to follow orders and she seems to be extremely “independent”. This might be due to the fact that she worked in small organizations before.
- Several challenges lie ahead of the local organization and Lisa might be extremely valuable as a partner for Peter (Global Head of HR) in the future. She might as well be a problem for him.
- Peter now has to decide what to do with his former colleague. He enjoyed working with her very much and now he has to be very “bossy”, persistent, in other words.
- Could this be a coalition between the VP and Head of HR in the US against Peter, to show that Lisa finally is the no. 1 who makes the decision the way she want?
- If Peter shows ‘weakness’, he might lose face and lose the trust of the employees in the organization.

3.4 Peter’s Options

The following options are the ones that have been mentioned most often by student groups and they are the basis for the following discussion.

- Scold her and talk to the employee to accept the decision
- Overrule Lisa’s decision
- Do nothing. It is not that bad; Lisa had made valuable contributions during the last decade
- Fire Lisa

Sometimes students come up with the notion that Peter should talk to all involved first to clarify the situation. This might be a good idea, but it can also indicate that the students avoid to deal with the case. Whenever this happens, and no other student comments in that, the case teacher can refer to the case, where it is indicated that he already talked to everyone and that the situation is clear: “But now, after reading the email again, *and having talked to the involved parties via phone*, it seemed as if she had crossed a line.”

The options are now discussed by focusing on the pros and cons for each option. Additionally, an overall recommendation for this option is given. Again, it is important to state that the pros and cons are not mutually exclusive and can (should) be complemented after each discussion, if a new aspect comes up.

3.5 Scold her and Talk to the Employee to Accept the Decision

This scenario might not be the best idea.

Pro	Con
<ul style="list-style-type: none"> • Lisa could stay in the company and would continue her work that is – overall – beneficial. • Her husband will also stay. 	<ul style="list-style-type: none"> • The employee will be frustrated and probably leave. • The corporate HR culture will be harmed. • She might not continue to perform when the organization has to become more process-oriented and less hands-on. • Lisa might not take the scolding seriously enough.

3.6 Overrule Lisa's Decision

This scenario is not really a good idea.

Pro	Con
<ul style="list-style-type: none"> • He will be able to show the US employees that headquarters cares and tries to do things right. • He could show Lisa “her place” in the “chain of command”. 	<ul style="list-style-type: none"> • Lisa would lose face (even if this were not that much of an issue in the US/Germany), but her credibility would suffer a lot. • The VP will be harmed as well. • It might be likely that Lisa will quit on short notice, leaving Peter no control over the process. If she leaves, her husband might leave as well (depending on the job situation).

3.7 Do Nothing

Probably the worst thing. However, sometimes students claim that this might be a good thing to do anyway. In this case I try to focus on the benefits of such a behavior and they realize that it is not beneficial at all.

Pro	Con
<ul style="list-style-type: none"> • none 	<ul style="list-style-type: none"> • Peter will lose credibility. • Lisa might be encouraged to stretch the rules again. She still has problems to follow orders from headquarters and this might get worse. • The culture in the US LLC might be affected in a negative way (no support of people who want to develop). • The employee (Brian) might leave or even worse, be frustrated. • Word might spread that HR cannot be trusted.

3.8 Fire Lisa

Unfortunately, the solution that might be the most reasonable in terms of compliance and securing his position (see comments about the theory below). As one student once commented: “There is cancer growing in the organization and this cancer has to be removed before it can spread and infect the entire system.”

Pro	Con
<ul style="list-style-type: none"> • Clear decision. Peter would send a signal to the entire organization. • She and her husband will lose credibility anyway (except with option 3) and it might not be possible to keep her (them) in the organization. • It is not too likely that the VP will quit. The situation on the job market for such positions is limited. • It seems as if she struggles with the “new”/ bigger organization and the demands that come with it anyway. 	<ul style="list-style-type: none"> • He has to find a replacement and there are challenges ahead. • It seems as if Peter did not manage to help her adapt to the demands of the new organization. Unfortunately, now it is too late to start with it.

Students might come up with the question whether the employee (Brian) was a good one (which he was), so that the Vice President wanted to keep him in his department or if it would not be a problem to let him leave. From my point of view, this should not affect the decision to let him go: If he is a very performant employee you will not be able to keep him in the position he obviously wanted to leave, for too long. Better support him and plan the transition well. If he is an underperformer, it would not make sense to keep him (in the organization at all). However, this might lead to an interesting discussion between the students and I usually try to reflect this question back to the group: “What kind of difference would it make whether he is a ‘good’ one or not?”.

3.9 Wrap-up

In addition to the three trigger questions that were shown above, the following ones might help to **wrap-up** the discussion – or keep it going, if needed:

- What would you recommend doing afterwards (after whatever decision Peter took – i.e. firing Lisa)?
- In which way will this decision (either firing or keeping her) affect the culture in the U.S. subsidiary?
- When would it be ok to stop people from switching jobs and what are the risks associated with this?
- Where have you experienced a situation where you had to make a tough call on someone you like?

Theory can also be added to conclude the discussion. These concepts in particular are suitable from my point of view and two articles are recommended for reading (Van Sell/Brief/Schuler 1981 and Jones 1991):

1. Foucault's thoughts on **power** and **discipline** (Foucault 2012; Foucault/Ewald/Lagrange/Defert/Ansén/ Bischoff/Gondek/Lemke 2005)
2. **Role theory**, identity (Krappmann 2016; Van Sell/Brief/Schuler 1981; Merton 1968; Helm 1971) and **organizational development** (Draft 2015)
3. Alinsky's reflections of the primary and secondary relationship (Sanders 1970), based on Cooley's **social order** (1909).
4. Jones (1991) concept of ethical **decision-making** of individuals in organizations

The above-mentioned concepts are too complex to illustrate them here in detail. However, they might be valuable pre- or post-reading for the class, depending on the overall topic the case is embedded in and dependent on how much resources can be devoted to reading.

Power and **discipline** are two subjects that Foucault dealt with extensively, and it might be helpful to refer to some of his thoughts in relation to the case. One interpretation of his thoughts, in relation to the case could be that he comments that the employee (the body) will only be a resource when he is productive and disciplined, even subdued, which can happen in a very subtle, calculated and organized psychological way (Foucault 1976: 37). One interpretation of Foucault's thoughts in relation to the case might be, that Peter has to discipline Lisa, and her Husband as well, to restore or – due to his limited time in the position as Global Head of HR – establish his own power position in the organization.

According to Foucault, the punishment has to be visible for others in the organization, because "The public execution did not re-establish justice; it reactivated power." (Foucault 1995: 49). "The public execution, then, has a juridico-political function. It is a ceremonial by which a momentarily injured sovereignty is reconstituted. It restores that sovereignty by manifesting it at its most spectacular." (Foucault 1995: 48). To do so, he described "[t]he rule of minimum quantity. A crime is committed because it procures certain advantages. If one linked, to the idea of crime, the idea of a slightly greater disadvantage, it would cease to be desirable. 'For punishment to produce the effect that must be expected of it, it is enough that the harm that it causes exceed the good that the criminal has derived from the crime' (Beccaria, 89)." (Foucault 1995: 94).

At the same time, he suggests that the punishment will be seen by others who have not committed the crime (The rule of lateral effects). This notion of punishment might avoid that others in the organization consider 'messing' with Peter. At the same time, the employees will see that he is punishing Lisa, which might restore their trust in him as a person, living up to his role. Foucault suggests to "[a]nalyze punitive methods not simply as consequences of legislation or as indicators of social structures, but as techniques possessing their own specificity in the more general field of other ways of exercising power. Regard punishment as a political tactic." (Foucault 1995: 23).

This tactical approaches can be part of a role that is fulfilled by Peter. However, the suggestions above should be discussed cautiously, since they are not meant as a normative *how-to guide* or a particular management technique.

The concept of **Role Theory** and identity (Krappmann 2016) seems to be an interesting one, in relation with organizational development (Draft 2015), due to the fact that Peter recently has changed his role, being promoted from a regional position, where he had been a peer of Lisa, to a superior position, overseeing the global HR activities. Technically, this makes him Lisa's boss. At the same time the requirements of Lisa's job seem to change. She was very successful in a hands-on role. Now she has to learn to adjust to a global organization that needs more structure. Draft is describing how an **organization** changes when it grows (Draft 2015: 352). This concept can be discussed with the students and the question can be raised at which stage the organization (GWS) might be right now and why:

1. During the **entrepreneurial stage** a lot of creativity is needed, and a hands-on attitude might be helpful, while the management team is involved in day-to-day business. Leadership functions are not clearly developed, and a crisis might arise that shows that leadership is needed.
2. After leadership has been successfully established, provision of a clear direction is given during the **collectivity stage**. While these directions are given, delegation and control become more and more important and a need for both arises.
3. Based on this need, internal systems are added, and the organization enters the formalization Stage. GWS might be between collectivity and formalization or within the formalization stage. Lisa and Peter now have to negotiate delegation and control mechanisms and agree on internal systems. In this particular case, the people involved have to negotiate what happened when someone (in this case Lisa) violates the rules that are in place. Even before that, it might be necessary to establish a formal rule for such an incident, as it has happened in the case. The specific case might serve as an example for how the organization will deal with processes. Lisa might still be stuck in a role that fits the **collectivity stage** and now has to learn to adapt.
4. While she tries to adapt, she might realize that the company, as it is now, is not the environment she would like to work in. She might also realize that she has to deal with 'too much red tape', which is necessary for an organization to overcome and to enter the **elaboration stage**. Successfully mastering this stage means establishing teamwork, with the risk that the organization as a whole becomes too homogeneous, and needs revitalization after a while. Mastering this last challenge might then lead to streamlining and small company thinking, continued maturity, or – if not successfully mastered – to a decline of the organization. The same might be true for Peter and Lisa. Either they master the challenge of adapting to their new roles, or their performance and standing in the organization will decline.

Returning to the roles of Peter and Lisa that have changed recently, related theories from sociology might be extremely interesting to discuss with the students (for a brief overview see

Stets/Burke 2000; for a very comprehensive deep-dive see Krappmann 2016 or Mead 1934 as one of the fundamental texts, besides various publications of Goffman. Merton 1968 provides a concept of functional analysis to understand the underlying social structure in the case. Helm 1971, criticizes the distinction of Merton between manifest and latent functions as ambiguous (Helm 1971: 51)).

Using these theories requires the case teacher to be familiar with the concepts above and it should be valuable for the class as a whole to add these concepts, when time for an in-depth discussion is given to this topic. I like to include ideas from role theory because role and identity conflicts are patterns that can be found in several cases. The Wolfgang Keller at Konigsbrau-TAK (A) case (Garbarro 1997) shows, for example, that two personalities struggle in their new roles because of their professional histories in organizational backgrounds that are different from the one they are involved in now.

In a nutshell, it can be discussed with the students that professional identity is a negotiation process between individuals that are involved in the interaction. Such a process is often unconscious and the individuals are faced with a dilemma: they have to meet expectations that others have concerning their roles. They have to show role conformity. If they do not, there is a risk that they are not accepted by others. At the same time, they have to present themselves as individuals (Krappmann 2016: 7). Role conflict and ambiguity lead to additional issues in a case when there are different expectations regarding the role that are not congruent, which might lead to a role conflict. An ambiguous role can also lead to a conflict, or at least confuse the involved individuals, when it is unclear what expectations are associated with a role, how such expectations should be met and what the consequences of role performance might be (Van Sell/Brief/Schuler 1981: 44).

Krappmann (2016) provides a very comprehensive overview about sociological dimensions of identity but it is also a challenging read for students who are not familiar with the topic. Two other disadvantages, for some contexts, are the length of the text and the German language. Instead, van Sell, Brief and Schuler (1981) might be a good pre- or post-reading article that can be used with the case.

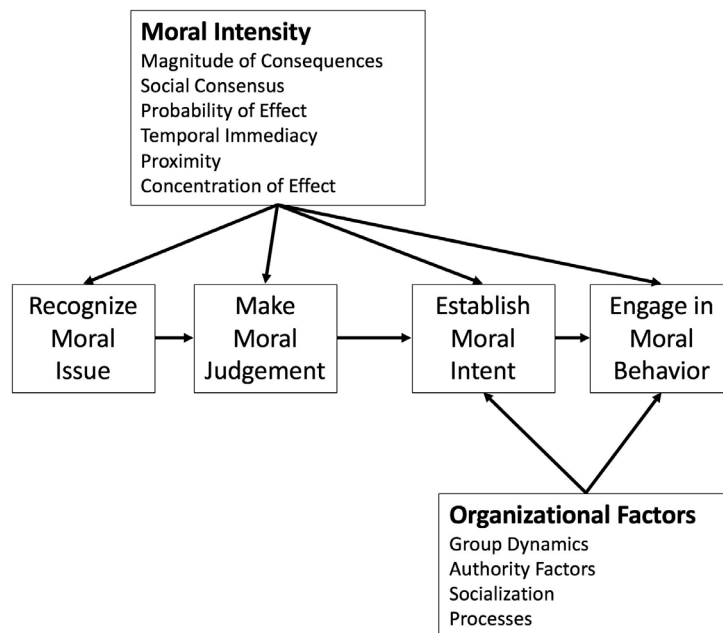
Overall, Peter had to make a decision what to do with Lisa. In reality, he terminated her contract and chose one of the options above. The decision might make sense from Foucault's perspective on punishment and a way to fill the role of leader in the organization. However, the decision might not have been an easy one, considering the **social order** and personal relationship between Peter and Lisa. Alinsky reflects how difficult it is to make a tough decision, when you know the people personally and talks about his experience with the Al Capone gang in Chicago:

“In the Capone gang I learned, among other things, the terrific importance of personal relationships. Nitti [a gang member] once explained me why from time to time they were hiring out-of-town killers. It's one thing, he said, to go up to a guy you don't know. [...] You walk up to him in a crowd and put the gun up against his belly and you let him have a couple [of gunshots] and fade off. That's doing a job. But if the killer knows the other guy

[...] then it becomes murder. It isn't a job anymore, and he's going to hesitate, and maybe not even do it. That was the reason they used out-of-town killers. This is what sociologists call a "primary relationship" (Sanders 1970: 21).

Alinsky's notion of a primary relationship might not fit the one that was created by Cooley, who defined a primary group as "[...] those characterized by intimate face-to-face association and cooperation. They are primary in several senses, but chiefly in that they are fundamental in forming the social nature and ideals of the individual." (1909: 23). However, the relationship between Peter and Lisa is characterized by personal bonds and they might have developed something like a primary relationship in the way described by Alinsky, which made it harder for Peter to 'pull the trigger' and to professionally 'murder' a colleague. Something that is a relevant discussion for managers in organizations that have to deal with the fallout of change. From a theoretical point of view, the notion of the primary relationship concept and how to deal with tough decisions should suffice. For a more comprehensive discussion, issues associated with ethical **decision-making** can be picked up. To do this, the article of Jones (1991) reflects the impact on decision that have to be made, taking several aspects into consideration (see **Figure 2**).

Figure 2: An Issue-Contingent Model of Ethical Decision Making in Organizations



Source: adapted from Jones 1991: 379

Using this model, I like to point out that "[o]rganizational factors are likely to play a role in moral decision making and behavior at two points: establishing moral intent and engaging in moral behavior." (Jones 1991: 391). At the same time, a discussion about the moral intensity of a decision, which Jones describes are worthwhile and might fill a session alone. I recommend reading the article pre- or post-class.

In the everyday reality of teaching with cases, assigning texts to the students before the class, as an addition to the case is often not successful. I encourage students to read the articles afterwards. Very often the case discussion helps to understand the theory a bit better.

After the case discussion it can be a good next case to watch an episode of *Spartacus* (Fahey/Hurst 2013; Radel 2018) that deals with a tough decision by the Roman Emperor who struggles, like his son, with taking different roles (the father vs. the Emperor and the son vs. the commander). In the end, father and son changed and filled their roles of an Emperor and as a Commander, but the cost of doing so is extremely high. The relationship between father and son is severely harmed and the best friend of the son died by the hands of his friend during a procedure that is called decimation.

At the end of a case discussion, students usually ask for the 'solution' of the case, which I seldom provide for two reasons:

1. Students, especially when they are inexperienced and insecure, might take the solution as the only one and try to act in a same way in any other situation that is similar, without reflecting their choices.
2. Students learn that you will tell them the solution anyway. Due to this, the risk of passive students increases.

I tend to leave them in a state of slight frustration afterwards, creating a Zeigarnik-Effekt, hoping that the students remember discussions as better that seem to be interrupted or unfinished at some point, than if they would be finished, similar to cliffhangers in movies.

4. Limitations

This article dealt with the reflection of a specific case study that can be used to introduce and to discuss specific concepts with a group of students. Even if the teaching note above has been shortened, and the full TN should be considered as incomplete anyway, a sound basis should be provided to teach and reflect the case with a group of students.

However, several aspects are still open and were not solved in the article. There is still the risk of emotional detachment due to less experience with the case method or due to little attachment to the protagonist of a case. Not only the students might be a limiting factor in teaching, but also the case teacher himself. He or she has to feel comfortable enough to shift the focus away from a traditional lecture towards a more student-centered approach. The theory input that has been provided here might serve as an anchor for students and teachers alike, to complement quite an open discussion with more rigid and structured theory. Discussing specific theories might be subject to the pre-knowledge of the teacher or his willingness to make himself familiar with a specific topic in addition to the case, which only seems to make sense, if it would be beneficial

for the course overall. Some case teachers even object to teaching a case with a specific theory attached to it and focus purely on the discussion of the case. Whenever using theory or not, it seems to be a question of personal style rather than 'right' or 'wrong'. As indicated above, I suggest accompanying the case at least by two articles (Van Sell/Brief/Schuler 1981; Jones 1991).

Finally, the TN implies that there is a 'best' way to teach and to reflect a case, but there are probably many more aspects to discuss, than the ones that were presented here and every teacher, every new class might add new perspectives on the case and trial and reflection is the key to successfully teach with this case.

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Age bias in recruitment decisions in Austria



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Abstract

The paper investigates age discrimination in personnel selection decisions across different industries and positions in Austria. A factorial survey approach (FSA), also called vignette study, is applied. This semi-experimental research method combines the advantages of both survey research and classical experiments. A vignette is a short description of a social situation or a person that consists of several characteristics (factors and their levels) which can be simultaneously manipulated. The experimental design takes on all possible combinations of factor levels across all factors and thus allows studying the effect of each factor on the dependent variable as well as the effects of interactions between factors on the response variable. The impact of each dimension on the respondents' judgment can be estimated accurately. More specifically, through a vignette design it is possible to investigate the effect of age alone on selection decisions, a factor that is usually confounded with other factors in reality. The respondents in this study are HR managers from different organisations in Austria. They are given hypothetical applicant scenarios and are then asked to state the hiring desirability for the respective job seeker. The paper elaborates on the research method and presents the results of multilevel analysis.

Keywords: Age discrimination, personnel selection, vignette approach

1. Problem definition

Many industrialised countries are facing demographic change. Rising life expectancies together with declining birth rates constitute a great challenge for labour markets regarding the composition of the labour force. Employers are confronted with an aging workforce as well as substantial turnover due to baby boomers' retirement (Hasselhorn 2015; Szinovacz 2011). The potential of older employees will be increasingly valuable for organisations in the future; however, the labour market opportunities of older workers are reported to be poorer than those of younger ones (Johnson 2008): older job seekers need about twice as long as younger ones to reintegrate into the labour market after career breaks. If they succeed in re-entering, they find employment in a limited range of occupations and sectors compared to younger job seekers (Bendick et al. 1999). Labour market statistics also display lower employment rates for the age group 55-59 years (Statistik Austria 2014). These reduced chances of older workers might be due to differences in productivity, but they might also be the result of age discrimination, which often occurs in more subtle ways and is hard to detect. This particularly applies to the process of employee selection (Richardson et al. 2013; Büsch et al. 2008).

Evidence of self-reported age discrimination from the Eurobarometer survey (European Commission 2008) indicates a substantial amount of subjective discrimination in Austria. More "objective"

measures of age discrimination, however, are lacking. In Europe, we know very little about employer attitudes towards older workers and the factors affecting managers' decisions to employ them. For German-speaking countries, the topic of age discrimination has been widely neglected (Mairhuber/Prammer/Waginger/Steinbauer 2015). This contrasts with extensive research on attitudes, stereotypes and discrimination of older workers in the Anglo-Saxon countries, dating back to the 1970s. Moreover, most research has focused on the supply side of labour markets: on the supply of older workers, their socioeconomic characteristics, their experiences with discrimination, or alternative work arrangements (Adler/Hilber 2009). But less is known about the demand side of the labour market and employers' ambitions to recruit older workers (van Beek et al. 1997; Karpinska et al. 2011).

The study aims to fill this research gap. To forecast future challenges for labour markets due to demographic change, it is important to understand the demand side of labour markets and employers' decisions in personnel selection. Raising employment participation levels of older workers is a high priority among European policy-makers, and this target can only be reached with the support and understanding of those employers who make fail employment decisions (Conen et al. 2011). The main research question addresses the relevance of age in selection for entry-level jobs across a broad range of industrial sectors. Moreover, the project also investigates the importance of factors other than age that might have an impact on managerial decision-making, such as sex, the existence of social networks, social capital or job history. What are the characteristics that enhance or limit the hiring chances of applicants of different ages? In addition, characteristics of the organisation and of the respondents are included in the analysis as well.

2. Employers' attitudes and practices towards older workers – literature review

In Europe, we know only little about employer attitudes towards older workers and the factors affecting managers' decisions on employing them (Hasselhorn 2015; Karpinska/Henkens/Schippers 2011). For German-speaking countries, the topic of age discrimination has been widely neglected (Mairhuber et al. 2015). This contrasts with extensive research on attitudes, stereotypes and discrimination of older workers in the Anglo-Saxon countries, dating back to the 1970s (see Morgeson et al. 2008; for a meta-analysis, Bird/Fisher 1986; Avolio/Barrett 1987; Rupp/Vodanovich 2006; Finkelstein/Burke 1998). Robert Butler introduced the term "ageism" (Butler 1987) and placed it next to other forms of discrimination, such as sexism and racism. Different definitions of this term have evolved, but ageism generally relates to the negative treatment of older people based on their age.

Negative age stereotypes are suggested to be critical barriers to the employment prospects of older workers. A large body of literature has addressed this issue of age stereotypes (e.g. Rosen/Jerde 1976, 1977; Avolio/Barrett 1987; Bird/Fisher 1986; Chiu/Chan/Snape/Redman 2001; Daniel/Heywood 2007; Posthuma/Campion 2009, for a meta-analysis). Negative age stereotypes describe older workers as being less productive, inflexible, unable to cope with new technologies,

less innovative and less creative compared to younger workers. Moreover, they are assessed as having difficulties in taking up new jobs, being slow in learning and not cooperating well with younger colleagues. At the same time, older employees are valued for having better social skills, being more reliable, more committed and loyal. Similar to the mixed findings concerning age stereotypes, the findings on employer attitudes towards older workers also display both positive and negative attitudes (van Dalen/Henkens/Schippers 2009).

Psychologists have run a number of laboratory experiments on age discrimination, mostly with students acting as raters of fictitious applicants (e.g. Bird/Fisher 1986; Rosen/Jerde 1976; Fusilier/Hitt 1983; Singer/Sewell 1989; Finkelstein/Burke 1998; Perry/Burhuis 1998; Rupp/Vodanovich/Crede 2006). The findings for the age effect are inconsistent: some studies reveal discriminatory attitudes towards older candidates, other studies do not display age effects at all. It becomes obvious that laboratory studies on age discrimination have high internal consistency but lack external validity due to the student samples.

Apart from laboratory experiments on age discrimination, a number of different research methods targeting employers are applied to study unequal treatment based on age. Other than findings on age stereotypes and ageist attitudes, which prove both positive and negative connotations with older workers, studies on age discrimination in the “field” provide a rather negative picture regarding the labour market situation of older workers, albeit systematic findings are lacking. Using the method of correspondence testing, Riach and Rich (2007) and Bendick, Jackson and Romero (1996) proved an age bias against older applicants in the pre-hire phase. More specifically, older job seekers were significantly less often invited to job interviews and therefore did not even get the chance to present their qualifications orally. In analysing job advertisements, Bennington (2004) identified ageist language as well as preferred applicant groups despite anti-discrimination legislation. As shown through a vignette design, Dutch employers are reluctant to hire early retirees despite their equal qualifications (Karpinska/Henkens/Schippers 2011a). The few studies that exist for German-speaking countries produced similar results. Applying questionnaire studies, an age bias against older applicants was detected in the hiring stage (Büsch/Dittrich 2004; Büsch/Dittrich/Königstein 2008). While correspondence testing targets the pre-interview phase only, questionnaire studies on age discrimination entail the risk of socially desirable response behaviour.

The vignette approach (also termed factorial survey approach) represents a research method particularly suited for the study of social norms and sensitive topics. It aims to understand the underlying mechanisms of social judgements (Rossi/Anderson 1982) by including several factors to reduce socially desirable responses. In the Anglo-Saxon world, vignette studies have been widely applied in sociology and social psychology in the fields of crime and deviance, social welfare and fairness issues, such as the fairness of earnings (see Wallander 2009, for an overview). It is striking, however, that factorial surveys have not been applied for the study of age discrimination (with the exception of Karpinska et al. 2011, who focused on early retirees). Few vignette studies so far have specifically targeted the selection process: van Beek, Koopmans and van Praag (1997) investigated the hiring chances of low-skilled workers, while de Wolf and

van de Velden (2001) studied the academic labour market. Valgaeren (2011) researched fairness issues in hiring from the perspective of the general population rather than employers; she included various dimensions of inequality, such as sex, ethnic background, and age. As already mentioned, Karpinska et al. (2011) were interested in the hiring chances of early retirees for remaining in bridge employment. The hiring chances of older applicants, however, have thus far been neglected. The present study picks up on this shortcoming and applies the factorial survey approach to the study of age discrimination.

3. The factorial survey approach and research design

A factorial survey approach (FSA), also called vignette study, is applied to study age discrimination in personnel selection. A vignette is a short description of a social situation or person that consists of several characteristics (factors and their levels) that can be manipulated simultaneously (Auspurg/Hinz 2015; Sauer/Auspurg/Hinz/Liebig 2011; Steiner/Atzmüller 2006; Jasso 2006). Instead of answering single items, respondents are confronted with scenarios of persons or situations and are then asked to judge the situation or person presented to them. The researcher can systematically manipulate the levels of factors in the vignettes by assigning different values to them. The experimental design takes on all possible combinations of factor levels across all factors.

A factorial survey always consists of two components: a vignette experiment as its core and a traditional survey for the supplementary measurement of respondent-specific characteristics (Atzmüller 2006). The combination of survey and experimental research can be regarded as the key feature of the vignette design. The experimental design of vignette studies allows determining the influence of each single factor on the judgement task and to weight the relative importance of each factor, which is often confounded in reality (Auspurg et al. 2009; Sauer et al. 2009). For instance, education and occupation often highly correlate with each other, and factorial surveys can solve this problem of multicollinearity in that the impact of each factor can be determined precisely (Auspurg/Hinz 2015). Another advantage of vignette studies is that by crossing a variety of factors, the complexity of the real world can be resembled better than by single item queries, which are sometimes too abstract. Respondents are forced to trade off dimensions in that they must simultaneously evaluate all the dimensions included in the design. Through the inclusion of multiple factors in the vignettes the target variable can be better disguised and responses are less prone for social desirability bias than in direct questioning of sensitive items (Pager/Quilian 2007). This is especially true for sensitive topics such as discrimination and prejudice, for which answers are shown to be more honest than in questionnaires (Auspurg/Hinz 2015). Moreover, by combining both experimental and survey research, both internal and external validity can be increased. Despite its strengths, a major shortcoming of the factorial survey approach concerns the issue of external validity. The method only allows measuring behavioural intentions and hypothetical decisions, which might differ from decisions in real-life settings.

Seven vignette factors were selected for the present study: age, sex, social capital, employment status, job history, international experience, and social skills. Apart from the factor age, which had four levels, all other factors had two levels. This resulted in a $4 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ design with a vignette universe of 256 vignettes. The applicants' education and work experience were both kept constant. In most cases, testing full factorial designs is not possible due to time constraints. Careful selection of the vignette sample is therefore necessary to obtain unbiased estimates for main effects and lower-order interaction effects. In the current study, by means of the package "Planor" a fractional factorial design was calculated in R (Kobilinsky 2005). Out of the universe of 256 vignettes, a fraction of one fourth was drawn, resulting in a sample of 64 vignettes. In a fractional factorial design, at least the b-coefficients of all main effects of the vignette factors can be estimated as mutually uncorrelated for each individual respondent.

4. Sample

The respondents in this study were 122 HR managers from mainly large organisations in various industries throughout Austria. They were contacted via the XING network "Austrian HR experts" and asked to complete an online questionnaire containing eight different profiles of hypothetical applicants plus items regarding the organisational context as well as demographics. The HR managers had to state the hiring desirability for each hypothetical job seeker. Completing the questionnaire took them approximately ten to twelve minutes. Since the vignette is the unit of analysis, 976 vignette judgements could be gained ($N=976$).

68% of the HR managers were women and 32% men, accurately representing the sex composition of the HR sector, which is characterised by an over-representation of women especially in operative HR functions. Regarding the age composition of the sample, exactly 50 percent of the respondents were up to 40 years of age, the other half was older than 40 years. 42% of the respondents had work experience of up to ten years, 36 percent had 10 to 19 years of relevant experience; and 11 percent of the respondents were highly experienced, with more than 20 years of experience in HR management; 11 percent did not state their length of work experience.

71% of the companies represented are large companies with 250 or more employees, 23% medium-sized (50-249 employees) and 6% small (up to 49 employees), as per the definition of company sizes of the Austrian Economic Chamber. The majority of companies operates in the service sector (61%), followed by manufacturing (20%) and commerce (19%).

Since the data have a hierarchical structure, multi-level analysis using random intercept and random coefficient models was applied to estimate the effect of each vignette factor on the two dependent variables.

5. Results

The findings of the vignette study show a significant negative age effect on both productivity ratings and hiring decisions ($\beta=-0.07$, $t[121]=-8.19$, $p < 0.001$). In other words, HR managers' assessment of applicants is strongly influenced by age: HR managers evaluate older job seekers as being less productive than younger ones and are reluctant to hire them. One can observe that with every year of age, an applicant's hiring chance declines by 0.07 points.

The present study focused not only on whether age per se affects selection decisions but also on the reasons why employers use age as a screening device. Consequently, the questionnaire following the vignettes included a question about challenges regarding the selection of older applicants. The item contained pre-defined answer categories with multiple possible answers along the lines of the questionnaire by Biffl et al. (2013). In addition, the opportunity was provided to give also an open answer, but this was not used by any of the respondents. One third of the HR managers in this study stated encountering difficulties in hiring older job seekers, with the major challenge being the considerably higher costs of older employees. This relates to seniority-based compensation, which forms an institutional peculiarity in Austria and is particularly pronounced for white-collar employees. Kolland (2010) argues that both the institutional framework, such as employment protection, seniority-based compensation and retirement provisions, as well as subjective employer perceptions of the productivity of older workers shape the employment prospects of older applicants.

Apart from age, the factors social capital ($\beta=0.31$, $t[853]=2.78$, $p<0.01$), employment status ($\beta=0.45$, $t[853]=3.96$, $p<0.001$) and individual job history ($\beta=0.25$, $t[121]=2.17$, $p<0.05$) also significantly impact the probability of being hired. Social capital refers to one's personal contacts relevant for the job search. The results indicate that HR managers in large Austrian organisations tend to use social capital as a screening device, thus preferring applicants with social contacts over job seekers lacking these. Employment status relates to being unemployed versus being employed at the time of application. The findings of the vignette survey show that HR managers prefer applicants in ongoing employment relationships over someone unemployed aiming to re-enter the labour market. Even though four months of unemployment – which was the duration stated in the fictitious candidate profiles – are only a short period and human capital deterioration is highly unlikely in this limited time-span, unemployment status seems to signal lower productivity to employers (Spence 1973). Next to employment status, job hopping is another aspect of job history data (Bills 1990), relating to applicants' past employment and the number of employer changes. Job history data is a highly relevant screening device for U.S. employers, which was also proven during the focus group discussion with Austrian recruiters that took place as a pre-study to the vignette setup. Respondents in the present vignette survey were found to prefer applicants in continuous employment with a single employer over job seekers with discontinuous employment histories with more than one employer. By contrast, HR managers in the present study did not differ in their evaluations regarding male and female applicants. In other words, they acted non-discriminatory regarding applicants' sex. Likewise, social skills were also not found to impact applicants' hiring chances.

As for HR managers' personal attributes (e.g. age, sex) and their influence on hiring decisions, it was found that age, sex and the amount of work experience are unrelated to the evaluation of hypothetical applicants. In other words, no in-group bias was detected in that younger HR managers would tend to favour younger applicants or that male recruiters would tend to prefer male applicants.

The influence of organisational context factors on hiring chances was also analysed. More specifically, it was assumed that selection decisions are usually not taken in isolation, but are embedded in a broader context of meso- and macro-level developments and labour market institutions influencing managers' behaviour towards applicants. Context factors in this study for instance related to whether the existence of an employee representative in a firm would increase the hiring chances of older applicants, or whether the size of the company, the share of older workers or the skill level of a firm would impact the hiring chances of older job seekers. The findings of this study only provide evidence that the share of older employees in a firm affects the hiring prospects of older job seekers ($\gamma=0.05$, $t[113]=1.71$, $p=.090$). To be more precise, it was shown that the oldest applicant group (age 58) has better hiring chances in organisations with a larger share of older employees and the lowest chances in firms with a predominantly young workforce.

6. Discussion and policy implications

The findings of this vignette study indicate that there seems to be discrimination against older applicants when large Austrian organisations are hiring. Age discrimination does not only seem to be the subjective perception of older employees who feel mistreated on grounds of their age, as findings from the Eurobarometer study (European Commission 2008) show, but discrimination also seems to relate to the behaviour of employers using age as a selection criterion. As such, the findings complement the supply side of labour markets – older employees' subjective views on age discrimination and their poorer labour market performance – with demand side factors. Discrimination against older workers seems deeply embedded in employers' attitudes towards this applicant group, indicating taste-based discrimination in the sense of Becker. In contrast to statistical discrimination (Phelps 1972), which is guided by stereotypes and rational calculations of productivity, taste-based discrimination against certain groups is grounded in prejudices and personal dislikes.

To tackle older workers' employment barriers, the effects of anti-discrimination legislation should be monitored especially in the hiring phase. In particular, equal opportunities bodies (Lahey 2006) could play an active role in selection processes by observing who is getting invited to job interviews, since disadvantaged groups are often already sorted out in the pre-hire stage and do not even get the chance to present their qualifications.

As stated above, the results show that older applicants have better hiring chances in firms with a higher share of older employees. This indicates that a daily routine of collaboration with older

workers helps to reduce or even abolish prejudices and stereotypes. This would also imply the relevance of a bonus-malus system for organisations employing older workers. A financial bonus for organisations willing to recruit older applicants or even a quota could help to increase employment participation of older workers. In addition, attempts to convince employers of the benefits of employing older workers should avoid treating older workers as a homogenous group (Taylor/Walker 1998). Rather, it is important to assess the individual worker/applicant with his/her employment history and strengths and weaknesses. This is not only grounded in a diverse conceptualisation of old age in the literature, but also in the multi-dimensional nature of ageist stereotypes, pointing to positive and negative characteristics of older workers.

To date, unsubsidised gradual retirement is no option yet in Austria. Rather, there is a subsidised old-age part-time employment scheme in place, which employees predominantly use as a block model rather than for a smooth transition. As such, it must be critically assessed, for it is used as a measure to exit the labour market sooner and thus misses its initial target of facilitating a smooth transition. This contrasts with other European countries, such as Sweden and the Netherlands, where gradual retirement in the sense of a smooth transition between work and retirement has become established as a measure to retain older workers longer in employment relationships (Kantarci/van Soest 2008). Since raising the employment participation levels of older workers is of high political concern in Austria, gradual retirement rather than an abrupt career end should become an option for employees. Such a measure would require openness of both employees and employers. Generally, a combination of supply- and demand-side measures must be in place to increase the labour market prospects of older workers.

7. Study limitations and outlook for future research

This study has applied the vignette methodology. Despite several strengths – reduced social desirability bias in particular – this methodology also has its limitations. The method only allows measuring intended and hypothetical decisions, which might differ from actual decisions in real-life settings. As such, a major shortcoming of the factorial survey approach concerns external validity. The question arises whether results on decision-making derived from vignettes are valid predictors of decision-making in real and more complex settings. Pager and Quillian (2005) compared the findings of a telephone vignette survey with an experimental audit study of the same employers on the topic of racial and criminal record discrimination. In the telephone vignette survey, employers could state whether they would be willing to hire whites versus blacks with and without criminal record, and in the audit study they could express readiness to invite to an interview for the different applicant groups. The findings indicate that the survey responses differ significantly from actual behaviour. More specifically, employers who stated that they would be willing to hire former offenders do not behave accordingly. The largest discrepancies between intended and actual behaviour can be found for black applicants with criminal records, indicating considerable actual discrimination against this group. The results show that actual discrimination

is even higher in real settings than expressed in vignette studies, shedding a negative light on the new findings of this research on age discrimination.

On top of its hypothetical character, the vignette approach simplifies complex situations in that it includes only a limited number of factors, which entails the risk of losing relevant information. The vignette factors of the present design were carefully selected based on a qualitative pre-study with HR managers as well as an extensive literature review. But clearly, factors other than the ones chosen for this design might have an impact on selection decisions, for instance other types of social skills, the length of work experience, the field of study or even appearance and health status, to mention just a few. Such information, however, was left out. Results might be different if some of these factors were replaced by others. But as already stated, the factors were carefully selected and the factor age was of particular relevance. In general, selection decisions are embedded in complex settings and also depend on the size and quality of the applicant pool, on time constraints and uncontrollable factors such as rapport between employer and applicant (Truxillo et al. 2006). This design included several relevant context factors, but certainly not an exhaustive list. It is important to keep the special group of respondents in mind: managers who are difficult to reach with empirical research and who have only limited, if any, time to complete surveys. Therefore, several trade-offs between the inclusion of both vignette and context factors had to be made to increase the response rate. Manager samples in other studies tend to be much smaller (e.g. Karpinska et al. 2011a; de Wolf/van der Velden 2001), or scholars opt to work with student populations to increase response rates (e.g. Jasso 2006), with the latter threatening external validity.

It should be kept in mind that the majority of managers participating in this study work in large Austrian private-sector companies. As such, the present study provides insight into employers' hiring behaviour in large enterprises and cannot be generalised for the Austrian business landscape as a whole, which is characterised by a very high number of small and medium-sized companies (more than 90 percent). Even though it is quite common in research on organisational decision-making to focus on large companies with formalised selection procedures, the current study does not address how decisions are taken at SMEs, the impact of age in these decisions, and whether older applicants are faced with restricted access to such companies as well.

Furthermore, it would have been valuable to investigate the reasons for employers' reluctance to hire older workers in greater depth. Therefore, suggestions for future research relate to a triangulation of research methods. This could be done by conducting qualitative interviews with a selected number of employers who have previously completed the vignette survey. Due to time constraints, the survey of the present study included only one item on the challenges employers associate with hiring older applicants. By conducting face-to-face interviews, more insights could be gained into managers' perceptions. Not least, the practical implications of this research suggest a need to more extensively consider the demand side of labour markets in developing and formulating policy advice to increase the number of older workers in employment.

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Barbara Waldhauser

ICT-related interruptions and work-related stress: a systematic literature review



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Abstract

Information and communication technology (ICT) is increasingly used in a working environment, but the benefits of being able to complete work-related tasks everywhere and at any time, such as increased flexibility and productivity, are increasingly outweighed by its side-effects, namely technostress and increased burn-out rates. Challenges in the context of work-related technostress include technology overload, interruptions and divided attention, as well as the loss of work-home boundaries.

This paper focuses on the challenges of technostress caused by interruptions and divided attention. Based on a systematic literature review using the PRISMA guidelines this paper discusses the effects of ICT-related interruptions (i.e. emails, messaging, smartphone use) on productivity, perceived stress, and affect at the workplace. The literature review includes studies investigating ICT-related interruptions and workplace-related stress and well-being, factors influencing the effects of ICT-related interruption on stress, and the costs and benefits of strategies for managing ICT-related interruptions. Articles with experimental, correlational and quasi-experimental research designs were included.

Results suggest that while ICT-related interruptions negatively affect stress and well-being they are also a possible source of perceived task accomplishment. The effects of interruptions are moderated by the hierarchical level of the sender of the message and the levels of conscientiousness and inhibitory deficits of the receiver. These moderators were also, in part, relevant in the effects of different strategies for managing ICT-related interruptions on perceived stress, productivity, and well-being. Concludingly, the paper provides recommendations on how to organize work-related ICT use to reduce the negative effects recognized by existing research.

Keywords: ICT use, technostress, New Work New Business

1. Introduction

Information and communication technology (ICT) is increasingly used in a working environment, but the benefits of being able to complete work-related tasks everywhere and at any time, such as increased flexibility and productivity, are increasingly outweighed by its side-effects, namely technostress and increased burn-out rates (Stich et al. 2018). Challenges in the context of work-related technostress include technology overload, interruptions and divided attention, and the loss of work-home boundaries (Brown et al. 2014; Reinke/Chamorro-Premuzic 2014; Stich et al. 2018).

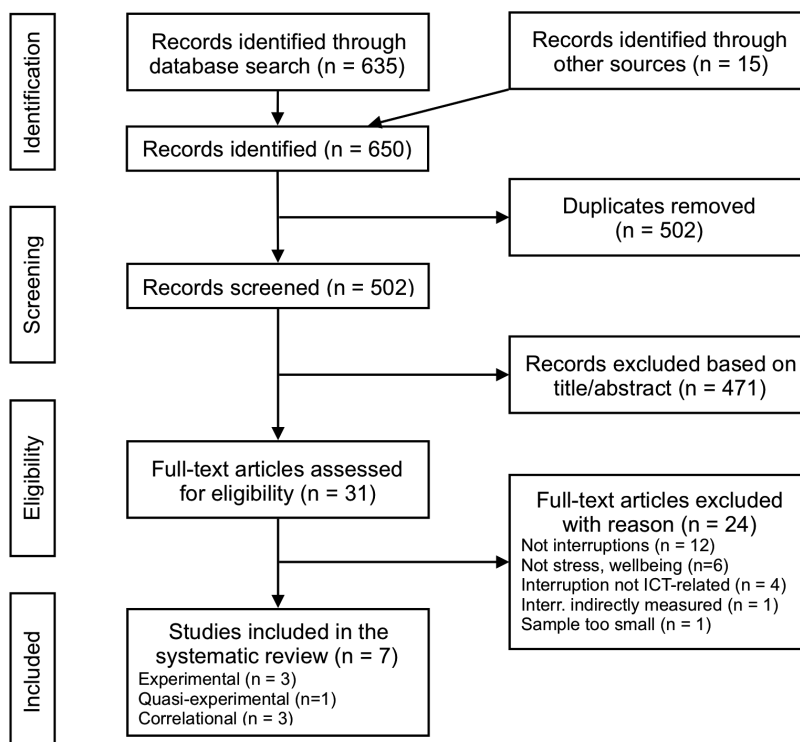
Interruptions are categorized into external interruptions, which are not self-initiated breaks or intrusions “that disrupt the process of working on a task” (Sonnentag et al. 2018: 3), and self-interruptions, which are internally-motivated lacking an external trigger (Adler/Benbunan-Fich 2013). In a connected collaborative workplace we mostly deal with cumulative interruptions. These accumulations caused by emails, instant-messaging, smart-phone alerts, etc. are likely to cause time pressure, errors, and emotional strain (Baethge et al. 2015). Studies on lost time and consequent time pressure (Barley et al. 2011; Leiva et al. 2012; Mark et al. 2005; Mark et al. 2008) show that the delay caused by interruptions is not limited to the completion of the interruption task but to delays caused by shifting and re-shifting attention from and to the primary task (Altmann/Trafton 2002; Mark et al. 2005). Baethge et al. (2015) suggest that rumination, the focused attention of thoughts on the unfinished task, next to time pressure and emotional strain is a consequence of interruptions which all increase with cumulative interruptions. These effects seem to be exacerbated by awareness of the dilemma associated with either attending to interruptions immediately and consequently falling behind with one’s work or leaving them unattended and possibly missing important information (Barley et al. 2011). What further intensifies negative consequences of ICT-related interruptions, are organizational norms related to online responsiveness. While the asynchronous nature of emailing or messaging would theoretically provide the option to attend to them according to one’s own pace, organizations impose cultural norms to not keep senders waiting (Barley et al. 2011). Responsiveness is also affected by telepressure, “the combination of preoccupation and urge to immediately respond to work-related ICT messages” (Barber/Santuzzi 2015: 172), and influences employees’ responsiveness. Those who are experiencing high workplace telepressure are more likely to allow themselves to be interrupted in their primary task.

As such, research has identified a number of challenges in the context of ICT-related interruptions and their consequences for employees. Considering the increasing pervasiveness of ICT-related communication in a working environment and the increased diversification of potential interrupters, which now not only includes email-notifications but also increasingly smartphone and smartwatch-related interruptions (Stothart et al. 2015; Wilmer et al. 2017), the goal of this paper is to provide a systematic review on effects of ICT-related interruptions (i.e. emails, messaging, smartphone use) on perceived stress, job satisfaction, and affect at the workplace. In doing so, this paper, following the introduction, firstly outlines the research procedure. The author then presents the results of the research structured around three main themes: online interruptions and well-being, factors influencing the effects of ICT-related interruptions, as well as (psychological) costs and benefits of managing ICT-related interruptions. The discussion session concludes with recommendations on how to organize work-related ICT use to reduce the negative effects recognized by reviewed research.

2. Method and search procedure

The present study was conducted as a systematic literature review using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Liberati et al. 2009; Moher et al. 2009). The search was conducted by applying a two-stage strategy. In the first stage, the author searched bibliographic databases (PsychInfo, Web of Science, and PubMed) by applying the following keywords: (email OR e-mail OR electronic mail OR messaging OR smart-phone OR smart-phone), (interrupt* OR disrupt* OR intru* OR distract*), (stress OR strain OR job satisfaction OR burnout). To focus the review on the most recent publications, the search was limited to studies published between 2013 and 2018. In addition to that, a snowballing technique was applied as stage two to identify studies using references of identified studies (n = 15). This strategy returned 502 records after the removal of duplicates. After screening titles and abstracts, records not related to the subject of this review, not published in English or German, and non-empirical studies were excluded. Further exclusions after assessing full-text articles included articles where interruptions were not ICT-related, not directly measured or addressed and where the outcome variables did not include stress or well-being. This process returned seven studies for this review (see Figure 1).

Figure 1: Flowchart illustrating the study selection process



3. Results

The studies identified in the systematic review include three experimental, one quasi-experimental, and three correlational studies which represent three main themes: online interruptions and well-being, costs and benefits of managing ICT-related interruptions, and factors influencing the effects of ICT-related interruptions. (see table 1).

Table 1: Summarized findings of the studies included in this review

Reference	summarized findings
Online interruptions and well-being	
Sonnentag et al. (2018)	Online messaging interruptions predict negative affect via time-pressure and positive affect via responsiveness and task accomplishment
Costs and benefits of managing ICT-related interruptions	
Kushlev/Dunn (2015)	Limiting email activities reduces perceived stress, improves well-being
Mark et al. (2016)	Self-interruption and batching of emails associated with higher perceived productivity; no connection with stress
Mark et al. (2018)	Costs and benefits of blocking internet-based interruptions depend on personality (conscientiousness)
Factors influencing the effect of ICT-related interruptions	
Gupta et al. (2013)	Effect of interruption on primary task completion dependent on hierarchical level of message sender
Russel et al 2017	Effects of delaying email checking on affective well-being depend on personality (conscientiousness)
Tams et al. 2015	individuals with greater inhibitory deficit are more likely to experience effects of interruptions, thus experience higher levels of mental workload and consequently stress - however, this effect was only observed in the high salience condition; interruption self-efficacy was a relevant moderator for stress;

While much discussion on the effects of online-interruptions on well-being focuses on negative affect and stress, Sonnentag et al. (2018) hypothesize effects on both positive and negative affect. Theorizing that, while email interruptions are possible sources of delays in task completion and, thus, add to time pressure, dealing with emails is also considered to be part of the job in many professions and could, thus, be linked to positive effects on perceived task accomplishment. In a study with 174 participants who completed a daily survey over five consecutive workdays, Sonnentag et al. (2018) find support for this hypothesis and as such provide new insight into the effects of email interruptions. Measuring perceived interruptions, time pressure, perceived task performance, and negative and positive affect, Sonnentag et al. found that perceived interruptions are positively correlated to time pressure and negatively associated with perceived task performance; high time pressure and low perceived task performance are associated with negative affect; but perceived interruptions are also positively associated with responsiveness which is positively associated with task performance and negatively associated with time pressure, thus, positively influencing affect. They link their findings to a multi-goal perspective where completion of email-tasks is considered a contribution to the overall goal, even though it might disrupt the current task.

The review identified one study which was exploring the role of social hierarchy and its effects on ICT-related interruptions and two studies exploring the role of differences in personality as resources for dealing with interruptions. The role of social hierarchy is the central element of an experimental study including 112 university students by Gupta et al. (2013) which explores the impact of interruptions in the form of instant messaging, social hierarchy, perceived task complexity on user performance and perceived overload. Building on the distraction-conflict theory (Baron 1986), Gupta et al. posit that messages received by a superior are given considerable more attention to, and thus, the effects of the interruption are being increased. Overall, the study finds that interruptions reduce task quality and increase perceived workload and these effects are indeed moderated by the hierarchical level of the sender of the message: messages sent by a peer increase the time spent on the primary task and messages by a superior decrease the time spent on the primary task. Higher priority given to an interruption task by a supervisor means fewer informational cues in the primary task are considered. Whereas interruptions by a peer do not affect the primary task strategy, and thus, might increase the task time due to recovery of memory cues relevant for the primary task. This assumption is supported by findings of poorer task quality in conditions where participants were interrupted by a superior. Interestingly, however, there were no significant effects of the sender's hierarchical level on perceived workload and the sender's hierarchical level did not moderate the impact of the interruption frequency on the perceived workload. Social hierarchy, thus, seems to impact the effects of interruptions on task time and task quality but not perceived workload. Gupta et al. (2013) acknowledge the limitations of their study, specifically the restrictions on generalizability due to their use of student subjects. Furthermore, it should be mentioned that the interruption tasks in their study were closely related to the primary task which might impact the effects on both task completion time as well as on perceived overload. It seems likely that an interruption task that is different to the primary task would deliver different results.

In contrast to the role of organisational factors such as social hierarchy influencing the effects of ICT-related interruptions, Russell et al. (2017) and Tams et al. (2015) explore the role of personality-related resources and deficits. In a correlational field study Russell et al. (2017) explore the role of conscientiousness, i.e. the personality trait of self-discipline and vigilance as a resource for resisting email interruptions and the relationship to affective well-being. The participants in the study, 52 knowledge workers from various industries, during a half-day period in their regular working environment, were asked to react to email interruptions as they normally would and to document their reaction. Russell et al. found that participants with higher levels of conscientiousness are more resistant to checking emails; this was especially the case when experiencing low affective well-being (AWB). In contrast, participants with low levels of conscientiousness showed lower restraint when checking emails in general with an even shorter time between alert and checking when under strain. Irrelevant to the level of conscientiousness, participants experienced lowered AWB after delaying checking an email; however, the negative effects were stronger for people with higher conscientiousness. The findings by Russell et al. also suggests deficits in constraining attentional responses in people with low conscientiousness, a personal deficit explored by Tams et al. (2015). Specifically, they address how interactions between interruption salience, interruption frequency and deficits in constraining attentional responses affect

perceptions of mental workload and consequently stress and whether interruption self-efficacy might suppress interruption-based stress. In an experimental study, 128 subjects participated in a computer-based task during which they were confronted with interruptive stimuli at either high (every 10s) or low (every 90s) frequency of low or high salience (red color coding for high salience, grey for low salience). Inhibitory deficits were being measured prior to the experiment, perceived mental workload, individual stress and interruption self-efficacy were being measured afterwards. Based on their experiment, Tams et al. found that individuals with greater inhibitory deficit are more likely to experience effects of interruptions, thus, experience higher levels of mental workload and consequently stress. This effect, however, was only observed in the high salience condition. Interruption self-efficacy was a relevant moderator for stress which suggests a possible point of intervention for employees with inhibitory deficits. As such, the study provides insight into the cognitive mechanisms that influence interruption-related stress. An important difference between these two studies is the question of external validity. Russell et al. (2017) conducted their research in a naturalistic environment which likely allows for some transferability of the findings to other work situations. The lack of an automatic recording of interruptions, however, might have affected how participants dealt with future interruptions. In their report, Russell et al. discuss in their report specifically the finding that in conscientious people the time between alert and checking increased over time. Thus, the results of Hawthorne effects are indicated.

While the previously discussed studies focused on the effects of ICT-related interruptions on well-being, and how the organisational and individual differences influence email responsiveness and consequently performance and/or well-being, the review also returned a number of studies analysing the psychological costs and benefits of managing ICT-related interruptions. Strategies for managing ICT-related interruptions include reducing the frequency of checking emails and messages to two to three times per day (batching), reducing external interruptions through deactivation of alerts but still continuously checking emails and messages at not pre-defined times, and also actively blocking online distractions by blocking online sites and alerts throughout the work-day or at predefined times. Based on a quasi-experimental study including 124 adults, Kushlev and Dunn (2015) explored the effects of limiting the frequency of email checking on well-being. Participants were randomly assigned either the unlimited or the limited email-condition in week one and the other one in week two. In the unlimited email-condition the participants were asked to continue with their email use as they normally would and the participants in the limited condition were asked to limit their email use to three times per day and to keep their email program and any notifications turned off outside that time. Measures included a self-report measure on email use which suggests a successful use of the manipulation, several daily measures such as distractedness by email, perceived stress and psychological well-being. Furthermore, measures on the activity level at half-time, and further measures on stress and well-being at week level as well as perceived productivity during that week were included. Results suggest a direct effect of the frequency of checking emails on daily stress and tension during an important activity. However, there was no significant difference between the conditions on the weekly stress measure. Other than the direct effects of the manipulation on stress, the indirect effects of the positive outcomes of the manipulation on measures of well-being (mindfulness, self-perceived productivity, sleep quality) were reported (Kushlev/Dunn 2015).

The batching behaviour explored by Kushlev and Dunn was also part of the study by Mark et al. (2016). However, in addition to batching, they also explore the effects of other email use patterns such as duration, and interruption habits on perceived workplace productivity and stress. The participants in this field study were 40 information workers whose data was collected at their workplace. Data included: the email duration proportion which was measured automatically as the ratio between time spent on emails and time spent on other computer tasks; the interruption type which was measured in a post-study interview and which was categorized as self-interruptions or external interruptions; the batching behaviour which was measured automatically and clustered in three categories, namely batchers who check and answer emails 2-3 times a day, consistentists who check emails consistently and mixed strategies; perceived productivity based on a daily self-report measure; and stress based on heart-rate variability measured by a heart-rate monitor which was worn during the waking hours of the study period. Effects of email duration, interruption type, and batching behaviour on stress and perceived productivity were explored both independently and as interaction effects of the duration and interruption type as well as duration and batching behaviour. With regards to perceived productivity Mark et al. (2016) found significant associations with email duration but no main effects with interruption type or batching behaviour. There is, however, an interaction effect of interruption type and email duration where with increased email duration those with self-interruption behaviour perceive their productivity the highest. Similarly, there is an interaction effect of email duration and batching behaviour, where during high email duration batchers perceive their productivity higher than participants with a mixed batching strategy. Regarding stress, the only significant associations found were with email duration. No effects were found with interruption patterns or batching behaviour, neither as main nor as interaction effects (Mark et al. 2016). The findings by Mark et al. suggest that email interruptions or batching behaviour affect neither stress nor perceived productivity. Only for participants with a high email duration, effects of these variables on perceived productivity could be observed. The study authors discuss this peculiarity where self-interrupters and batchers perceive their productivity as being higher with more time spent on emails than in the reference groups. This, the authors muse, could be due to different perceptions of email activities where some participants perceived the time spent on emails as equally important as their work and, thus, the time spent on emails as productive.

Blocking online distractions and interruptions as a strategy was explored by Mark et al. (2018). In a quasi-experimental setting, they explore the costs and benefits of blocking not-work-related online distractions based on individual differences such as the tolerance to distraction and personality factors such as conscientiousness and impulsivity. 32 information workers were asked to provide baseline measures for focus and engagement in work, productivity, and workload during week one in which they were asked to work as they usually would. During the second week of the study, non-essential websites were blocked during work time and measures were taken using the same instruments as in week one. In addition, participants were asked to keep their smartphones locked away during working hours and to only use them for essential calls. As hypothesized by the researchers, costs and benefits of blocking workplace distractions depended on the personality: The participants who were scoring high on social distractions and low on conscientiousness and perseverance showed highest benefits in terms of increased perception

of productivity, increased focus, and reduced cognitive load. However, the participants who were able to self-regulate distractions in a better way and, therefore, scored higher on conscientiousness and perseverance also reported higher costs: they experienced a higher increase in cognitive load and longer stretches of working without a break. In other words, these participants might have needed the breaks that are usually provided by workplace distractions (Mark et al. 2018).

4. Discussion

The purpose of this literature review was to provide a systematic review on the effects of ICT-related interruptions (i.e. emails, messaging, smartphone use) on perceived stress, job satisfaction, and affect at the workplace. It was found that while online interruptions are indeed a source of time-pressure and consequently negative affect, they are also positively associated with responsiveness which positively affects perceived task accomplishment and positive affect. This finding contrasts the broad body of research on the effects of ICT-related interruptions on stress and well-being which is focused on negative effects (Barley et al. 2011; Carton/Aiello 2009; Leiva et al. 2012). Not only do the results by Sonnentag et al. (2018) provide an additional perspective on how to view ICT-related interruptions, they might also provide some explanation on the contradictory results on the costs and benefits of strategies for managing ICT-related interruptions. While the findings by Kushlev and Dunn (2015) suggest some benefits of limiting email-communication to specific times, these findings could not be fully supported by Mark et al. (2016). They found that while batching is associated with higher perceived productivity, it is also associated with more time spent on emailing, but there is no association with lower stress. It seems reasonable that the findings associated with batching behaviour in the Mark et al. (2016) study could be explained through the multi-goal perspective which Sonnentag et al. (2018) apply in explaining the link between online-responsiveness, perceived task-accomplishment and affective well-being.

When contrasting the findings on managing ICT-related interruptions by Mark et al. (2016) and Kushlev/Dunn (2015), the differences in research design might play a role. Mark et al. (2016) conducted a correlational design where different strategies for managing email interruptions were designed and compared. Kushlev/Dunn (2015), on the other hand, used a quasi-experimental design where participants were randomly assigned to the limited or the unlimited email-checking condition in one week and the other condition in the other one. Where the study by Mark et al. (2016) lacks data for a base-line comparison due to automatic, in-situ measures of email-duration and email management and the use of biological measures for stress, the possibility of bias, which is often found in self-report measures and other effects associated with quasi-experimental studies, are reduced (Wilmer et al. 2017). Moreover, Kushlev and Dunn (2015) acknowledge when discussing the limitations of their study that simply reducing the frequency of checking emails will not necessarily affect well-being unless such behavioural changes are supported by changes in the organizational context in which the individual operates. This links to other findings on organizational norms with regard to online responsiveness (Barley et al. 2011) in general, and the effect of the level of social hierarchy of the sender of a message (Gupta et al. 2013) in

particular. Where the differences in organisational or social hierarchy are pronounced, messages by superiors are likely to be given more and more immediate attention, at the cost of performance quality in the primary task.

Besides the organizational factors influencing the effects of ICT-related interruptions and the effects of strategies for managing ICT-related interruptions, the review showed that individual resources such as conscientiousness and deficits such as distractibility and inhibitory deficits play a significant role. It was found that individuals who were scoring higher on conscientiousness are more resistant to reacting to incoming email alerts especially when under strain (Russell et al. 2017). Furthermore, individuals with higher inhibitory deficits are more likely to experience the effects of interruptions, which is linked to a higher mental-workload and stress (Tams et al. 2015). As such, it is not surprising that these characteristics also affect the effects of strategies for managing ICT-related interruptions and that the software which was blocking ICT-related interruptions was beneficial for the individuals with low levels of conscientiousness and higher levels of distractibility. The software also increased the cognitive load for the individuals with a high level of conscientiousness as it enabled longer stretches of working without a break (Mark et al. 2018). This suggests that there is not only one way for dealing with distractions that fits all, and it proposes that restrictions of online interruptions might indeed have negative effects for highly conscientious individuals who, as these findings suggest, might need external interruptions as a reminder to take an occasional break. No conclusion, however, can be drawn on how these individuals deal with an email batching strategy.

Based on the findings from the different studies included in this review, previous findings on the negative effects of ICT-related interruptions on stress, (perceived) productivity, and affective well-being (Barley et al. 2011; Mark et al. 2005; Mark et al. 2008) are affirmed (Kushlev/Dunn 2015; Russell et al. 2017; Sonnentag et al. 2018; Tams et al. 2015). However, in contrast to previous findings, online responsiveness is also associated with positive affect through higher perceived task accomplishment. A higher perceived task accomplishment or rather a higher perceived productivity, is also associated with certain strategies for managing online interruptions such as self-interruptions and batching behaviour (Kushlev/Dunn 2015; Tams et al. 2015); with one study also suggesting positive effects of batching on perceived stress and well-being (Kushlev/Dunn 2015). In practice, however, these strategies, including software blocking online-interruptions, will have to consider that the effects of interruptions are influenced by the hierarchical level of the message sender (Gupta et al. 2013) and by individual resources and deficits (Mark et al. 2018; Russell et al. 2017). As such, recommendations for practical application include increasing the awareness of one's online behaviour at the workplace as well as a mindful experimentation with different strategies for managing ICT-related interruptions. However, as outside pressures regarding the responsiveness might play a role in how employees experience and manage ICT-related interruptions, it is within the purview of the organisation to provide guidelines for healthy and productive strategies on dealing with ICT-related interruptions. Batching behaviour, which might be beneficial for some employees to reduce stress and increase perceived productivity and well-being, is not a feasible strategy in an organisational culture where high responsiveness is the norm.

5. Conclusion

The goal of this paper was to review current literature on the effects of ICT-related interruptions on perceived stress, job satisfaction and affect at the workplace. A systematic literature review using the PRISMA guidelines was conducted covering the years 2013-2018. The outcome were seven relevant studies. Based on these studies it can be concluded that while ICT-related interruptions, indeed, negatively affect stress and well-being, they are also a possible source of perceived task accomplishment. Studies focusing on the negative effects of ICT-related interruptions found that the effect of the interruptions is moderated by the hierarchical level of the sender of the message and the levels of conscientiousness and inhibitory deficits of the receiver. These moderators were also, in part, relevant in the effects of different strategies for managing ICT-related interruptions such as reducing the frequency of checking emails and messages to two to three times per day (batching), reducing external interruptions through the deactivation of alerts but still continuously checking emails and messages at not predefined times, and also actively blocking online distractions by blocking online sites and alerts throughout the workday or at predefined times. These strategies showed different effects in different studies. Hence, together with the findings on individual differences no clear recommendations on how employees should organize work-related ICT use can be suggested. Indeed, it seems that for different groups of employees counter-directional interventions might be helpful.

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Gruppenreflexion als Praxis des Projektmanagements

Abstract

In diesem Paper wird zu Beginn auf theoretische Aspekte und grundlegende Voraussetzungen des Kommunikationsinstruments *Gruppenreflexion* eingegangen. Außerdem wird eine Chronologie der mittlerweile acht Gruppenreflexionen innerhalb der Projektmanagement Symposien an der FH des BFI Wien dargestellt. Dabei wird aufgezeigt (1) wie *Gruppenreflexion* in der Praxis des Projektmanagements einsetzbar ist, wie (2) *teilnehmende Beobachtung* zur Erfassung von Gruppendynamiken eingesetzt werden kann und wie (3) eine Beobachtungsmethode in der *Lehrpraxis* nutzbar gemacht werden kann. Interventionswissenschaft und -forschung bilden die wissenschaftliche Grundlage für diese Vorgehensweise. Praxisnähe und Praxisrelevanz sind wesentliche Kennzeichen dieser Form von Wissenschaft, die sowohl inter- als auch transdisziplinär ausgerichtet ist.

This paper begins by discussing the theoretical aspects and basic requirements of group reflection as an instrument of communication. In addition, a chronology of the meanwhile eight group reflections within the project management symposia at the UAS BFI Vienna is presented. The paper shows (1) how to apply group reflection in the practice of project management, (2) how to apply participatory observation to gain knowledge on group dynamics and (3) how to transfer a method of observation into teaching practice. Intervention science and research form the scientific basis for this approach. Proximity to practice and practical relevance are key features of this form of science, which is inter- as well as transdisciplinary.

Keywords: Interventionswissenschaft, Gruppenreflexion, Systemanalyse, Organisationsbeobachtung, Didaktik

1. Einleitung

Insbesondere in projektorientierten Unternehmen sind Gruppen, neben der hierarchischen Organisation, ein wesentlicher Teil der gelebten Praxis. In diesem Paper wird dargestellt, wie sowohl das *explizite und implizite Wissen von Gruppen* als auch deren *Reflexionspotenzial* erfolgreich umgesetzt und weiterentwickelt werden können.

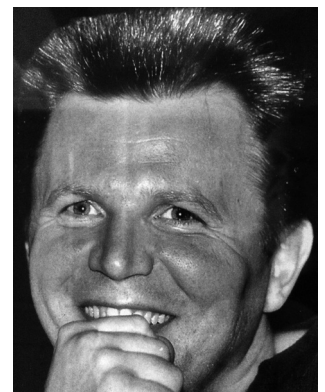
Die vom AutorInnenkollektiv durchgeführte, hier dokumentierte Interventionsforschung zeigt dabei auf, wie Theorie praxisrelevant eingesetzt und die dabei gewonnene praktische Erfahrung zum Weiterentwickeln von Theorie verwendet werden kann.



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verteidigung

Das mittlerweile zum 9. Mal durchgeführte *Projektmanagement Symposium* (2018) an der FH des BFI Wien bildete den Rahmen, in dem sich PraktikerInnen und ForscherInnen disziplinär, inter- und transdisziplinär auf eine Gruppenreflexion zu jeweils relevanten Themen einließen.

Im Paper werden von Schuster zu Beginn theoretische Aspekte und grundlegende Voraussetzungen des Kommunikationsinstruments *Gruppenreflexion* erörtert. Außerdem wird eine Chronologie von acht durchgeführten Gruppenreflexionen dargelegt. Dabei wird aufgezeigt, innerhalb welchen Rahmens *Gruppenreflexion* einsetzbar ist und wie diese praxisrelevante Ergebnisse liefern kann.

Insgesamt gliedert sich die Forschung in zwei Teile, nämlich (a) die gruppenspezifisch angelegte Moderation (Schuster) und (b) die teilnehmende Beobachtung (Pircher/Preßl). Die Erkenntnisse auf Grund der Beobachtung des Gruppenprozesses werden hier im Paper von Preßl dargelegt und ergänzen die theoretischen Betrachtungen.

Preßl fokussiert auf den Aspekt von informellen Dominanz- und Unterwerfungsphänomenen in Gruppen und zeigt dabei auf, wie theoretische Konzepte in Kombination mit Beobachtung praktikabel und pragmatisch zu einem Verständnis von Verhaltensweisen innerhalb von Gruppen bzw. Organisationen beitragen können.

Pircher gibt einen kurzen Einblick in die Methode der Beobachtung und zeigt auf, wie sie diese in ihrer gelebten Praxis in der Lehre umsetzt.

2. Theoretische Aspekte und grundlegende Voraussetzungen der Gruppenreflexion

Ausgangspunkt für das Design der hier dargelegten Gruppenreflexion ist die Didaktik der Gruppendynamik der Klagenfurter Schule. Die dort (weiter-)entwickelten Formate Trainings-Gruppe und Organisations-Training (T-Gruppe_{KS} und OT_{KS} [O-Lab_{KS} vgl. Duwe 2017: 49]; vgl. Krainz 2006: 27-28)¹ bilden die wissenschaftliche Basis. Sowohl die Struktur als auch der Inhalt der Gruppenreflexion sind auf das Aufspüren und Besprechen von nicht auflösbaren Widersprüchen ausgerichtet. Dies steht einerseits im Gegensatz zu den bei Vorträgen dargelegten *idealisiert konsistenten Modellen* bzw. *Theorien* und andererseits auch im Gegensatz zu bei Seminaren oder Workshops oft gezeigten bzw. ausprobierten *idealisierten Muster-Lösungen* von diversen Problemstellungen.

Der Sinn der Idealisierung liegt in der dadurch gegebenen Möglichkeit der Normierung. Um zu erreichen, dass viele Menschen miteinander abgestimmte Handlungen vollziehen, ist es

¹ Das _{KS} steht für Klagenfurter Schule. Weltweit gesehen gibt es 2017 in Bezug auf erfahrungsbasiertes Lernen in den Kontexten Gruppe und Organisation außerdem noch die Ansätze der National Training Laboratories (NTL) in den USA und des Tavistock Institute in Großbritannien bzw. das daraus entstandene A. K. Rice Institute in den USA (vgl. Neumann et al. 2004: 383-401). Eine detaillierte Darlegung des Organisationstrainings der Klagenfurter Schule findet sich bei Duwe (2017).

notwendig, den Betroffenen jeweils zu erklären, was diese zu tun haben. Idealisierung dient dazu, diese Erklärungen in sinnvollen Grenzen zu halten. Dabei wird von Vortragenden (Seminar-, WorkshopleiterInnen etc.) zumindest implizit behauptet: „Wenn Sie in Ihrer Praxis nach dem hier präsentierten Modell vorgehen, dann wird Ihr Vorhaben gelingen.“

Zum Problem wird Idealisierung dann, wenn diese als die eigentliche Wahrheit angesehen wird und ein Verfehlen des vorgegebenen Ideals lediglich zum Hinterfragen der vollzogenen Handlungen bzw. der AkteurInnen und nicht *zusätzlich* zum Hinterfragen des Ideals führt. Die oft aus Kalkül dazu angeführte Argumentation ist: „Sollte Ihr Vorhaben nicht gelingen, dann liegt es daran, dass Sie das erklärte Modell nicht ausreichend befolgt haben.“ Fallweise wird dies als Argument für den Bedarf einer *Nachschulung* der gescheiterten Personen missbraucht.

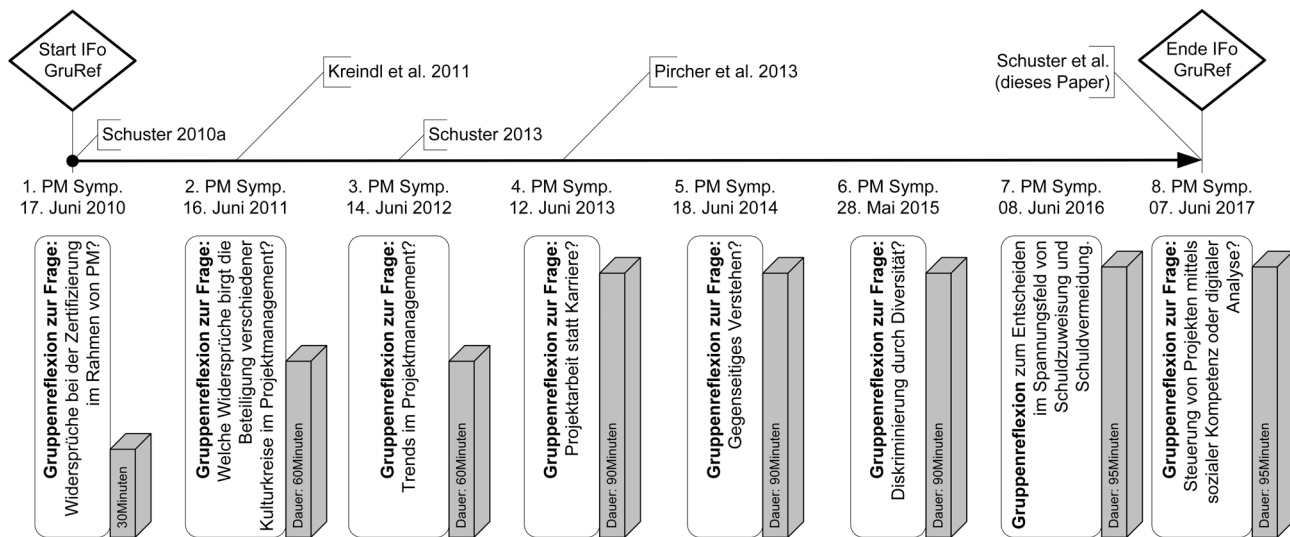
Die positive Sichtweise ist, dass eine Theorie (ein Modell) besser ist als keine Theorie, im Englischen findet sich dafür das Sprichwort: „(S)He who fails to plan, plans to fail“. Lediglich das Geschehen selbst kann die Komplexität des Geschehens voll umfassen. Theorie kann im besten Fall die Komplexität kommenden Geschehens soweit voraussehen, dass im Großen und Ganzen bei der Durchführung eine gute Übereinstimmung von tatsächlichem mit theoretisch vorabgeschätztem Geschehen gegeben ist.

Die Gruppenreflexion dient der Aufklärung der bei Vorträgen notwendigerweise idealisiert dargelegten Modelle bzw. Theorien und der Relativierung von für Übungszwecke benutzten Musterlösungen. Sie führt im besten Fall zur von psychodynamisch orientierten OrganisationsberaterInnen so bezeichneten depressiven Position (vgl. Lohmer et al. 2000: 315) aller Beteiligten. Depressiv deshalb, weil erkannt wird, dass *Gutes* (Angenehmes, Gewünschtes) und *Böses* (Störendes, Unliebsames) immer gekoppelt sind und damit jede Theorie bzw. jedes Modell – wie detailliert dieses auch dargelegt ist – neben positiven auch unabwägbare und negative Aspekte mit sich bringt. Bei Gruppenreflexionen wird das durch die von den TeilnehmerInnen eingebrachten Erfahrungen mit jeweiligen Theorien bzw. Modellen gut sichtbar, sofern es der Gruppe gelingt, solche Erfahrungsberichte anzunehmen und diese nicht z.B. durch Entwertung der berichtenden Person abzuwehren.

3. Chronologische Entwicklung des Kommunikationsinstruments *Gruppenreflexion*

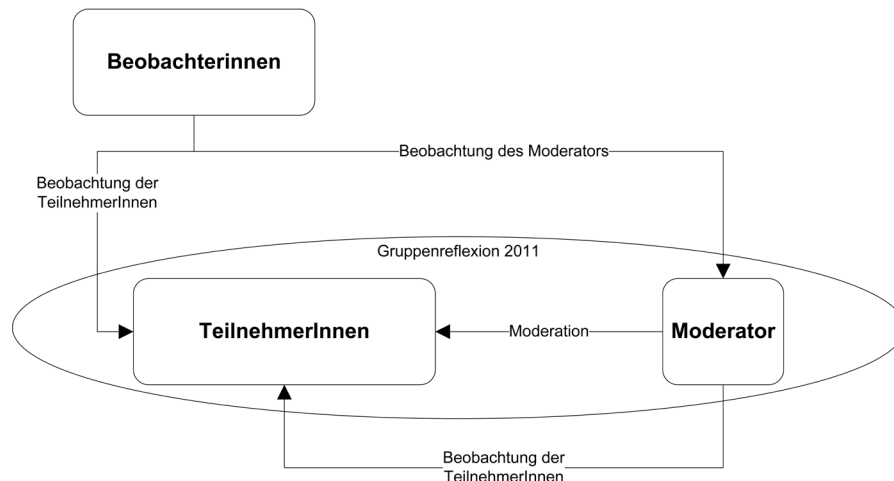
Die chronologische Entwicklung des Kommunikationsinstruments *Gruppenreflexion* vollzog sich im Rahmen von insgesamt acht Projektmanagement Symposien an der FH des BFI Wien über einen Zeitraum von sieben Jahren (siehe Abbildung 1).

Abbildung 1: Chronologische Entwicklung der Gruppenreflexion



An der ersten Gruppenreflexion (17. Juni 2010) nahmen 16 Personen teil. Es zeigte sich, dass die vorgesehenen 30 Minuten für eine Diskussion zu wenig waren (vgl. Schuster 2010a: 20 ff.). Für diese Gruppenreflexion wurde im dazu verfassten Working Paper dem Thema Zertifizierung ein eigener Abschnitt gewidmet (vgl. Schuster 2010a: 7 ff.). Insgesamt kann dazu vermerkt werden, dass die Gruppenreflexion aufgrund der knapp bemessenen Zeit zwar prinzipiell erfolgreich, jedoch inhaltlich entsprechend oberflächlich war. Die theoretische Ausarbeitung der Bedeutung von Zertifizierung im Rahmen des Working Papers war als Nachlese zwar geeignet, erfüllte jedoch nicht die interventionswissenschaftliche Zielsetzung der Vergemeinschaftung des Wissens der einzelnen TeilnehmerInnen mittels der Reflexion selbst.

Aufgrund der Erfahrungen wurde die zweite Gruppenreflexion (16. Juni 2011) mit 60 Minuten angesetzt. Außerdem wurde das erste Mal eine Beobachtung durch zwei Kolleginnen durchgeführt. Die Beobachtung hatte das Ziel, einerseits die Wirkung der Moderation und andererseits den Gruppenprozess an sich zu erfassen (Abbildung 2). Zusätzlich sollten die in der Gruppenreflexion gewonnenen inhaltlichen Erkenntnisse aufgezeichnet und in weiterer Folge einer schriftlichen Bearbeitung zugeführt werden.

Abbildung 2: Beobachtung und Moderation der zweiten Gruppenreflexion

Auch zu dieser zweiten Gruppenreflexion – zur Frage: Welche Widersprüche birgt die Beteiligung verschiedener Kulturkreise im Projektmanagement? – gab es eine Veröffentlichung (Kreindl et al. 2011). Neben einer Nachlese in Bezug zum Begriff *Kultur* im Kontext von Projektmanagement (Kreindl et al. 2011: 7-29) beinhaltet diese Studie zusätzlich die Berichte der von den Forscherinnen Pircher (ebd. 38-41) und Kreindl (ebd. 29-38) durchgeführten Beobachtungen.

Die gemeinsame Bearbeitung dieser Beobachtungen fand in einer Resonanzgruppe, zusammengesetzt aus Kreindl, Pircher und Schuster, statt. Dabei diente die Resonanzgruppe dazu, die Beobachtungen von Kreindl, Pircher und Schuster² gemeinsam zu diskutieren und damit einer – zumindest partiellen – Verallgemeinerung zu unterziehen. Dies zielte insbesondere auf eine intensive Betrachtung und gegebenenfalls Weiterentwicklung der Moderation der Gruppenreflexion durch Schuster ab und diente dazu, eine Forschungs-Community für zukünftige Forschungsvorhaben aufzubauen.

Diese zweite Gruppenreflexion brachte einerseits einen Fortschritt in Bezug auf die Beobachtung und auf das Setting, andererseits waren die ForscherInnen mit der Tatsache konfrontiert, dass lediglich vier Personen an der Gruppenreflexion teilgenommen haben³. Der Umstand, dass für diese Gruppenreflexion 60 Minuten zur Verfügung standen und dass lediglich vier Personen daran teilnahmen, führte dazu, dass sich eine intensive Diskussion aller Anwesenden entfalten konnte.

Die Beobachtungen, deren Analyse mittels der Resonanzgruppe und die daraus folgende schriftliche Darlegung der Erkenntnisse waren eine Erweiterung zum themenbezogenen theoretischen Teil und damit eine inhaltliche Innovation in Bezug auf die Publikation im Rahmen der ersten Gruppenreflexion 2010. Jedoch stellte auch diese Erweiterung lediglich ein Angebot dar, dessen Wirkung von der Bereitschaft der TeilnehmerInnen abhängt, sich mit der Publikation

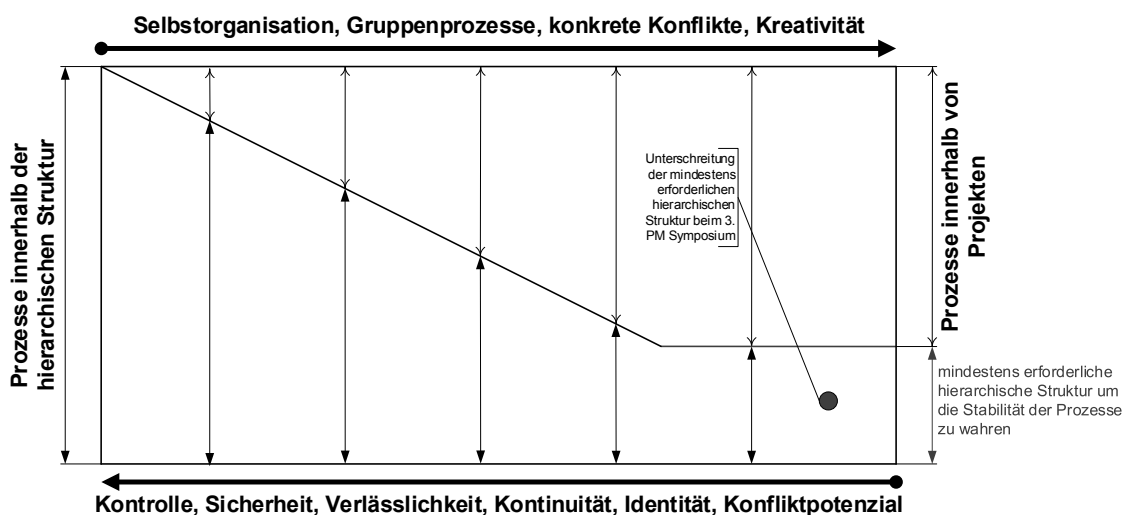
2 Aufgrund der Rolle des Moderators ist die Beobachtung durch Schuster zwar entsprechend von jener durch Pircher bzw. Kreindl zu unterscheiden, diese ist jedoch trotzdem ein wichtiger Aspekt für die Bearbeitung der Vorgänge in der Gruppenreflexion.

3 Damit bestand die Gruppe aus insgesamt fünf Personen – vier TeilnehmerInnen und einem Moderator.

auseinanderzusetzen. Die wesentlichen Fortschritte aus interventionswissenschaftlicher Sicht waren, dass nun 60 Minuten für die Gruppenreflexion zur Verfügung standen und dass der Prozess beobachtet wurde. Die TeilnehmerInnen hatten in dieser Zeit Gelegenheit dazu, ihre jeweiligen Ansichten und Erfahrungen zum Thema *Kultur* im Projektmanagement auszutauschen und damit – im besten Fall – ihren Erfahrungshorizont zu erweitern.

Aus organisatorischen Gründen ergab sich für Schuster im Zuge der Vorbereitungen für das dritte PM Symposium (2012) die Möglichkeit, dieses maßgeblich mitzugestalten. Die Details bezüglich des Designs und des Ablaufs sind bei Schuster (2013: 45-71) nachzulesen. Rückblickend kann festgestellt werden, dass diese Veränderung der Aufgabe, nämlich von der Gestaltung einer Gruppenreflexion hin zur maßgeblichen Mitgestaltung des gesamten PM Symposiums, zwei grundlegende Probleme mit sich brachte. (1) Dass ich [Schuster] selbst zu sehr in meiner „[...]“ eigenen Begeisterung für die Gruppendynamik an sich gefangen war und dadurch Voraussetzungen bei den TeilnehmerInnen des PM Symposiums bzw. bei Mitgliedern des Organisationsteams annahm, die diese unmöglich erfüllen konnten“ (ebd. 67). (2) Dass der Fokus auf das gesamte Symposium die Organisation der Gruppenreflexion in den Hintergrund drängte. Was die Überbetonung des Freiraums für gruppendynamische Selbstorganisation betrifft, so hat diese – so die Hypothese – dazu geführt, dass bei der hierarchischen Struktur⁴ des *dritten PM Symposiums* ein kritisches Mindestmaß unterschritten wurde und deshalb der Ablauf destabilisiert war (Abbildung 3). Mit anderen Worten: Es wäre mehr autoritäre Führung angebracht gewesen. Dies zeigt auch, dass Freiräume grundsätzlich kritisch zu betrachten sind und nicht automatisch als sinnvoll angesehen werden dürfen (vgl. Krappmann 2010: 28-29).

Abbildung 3: Unterschreitung der mindestens erforderlichen hierarchischen Struktur



Quelle: Schuster 2010b: 10, eigene Abänderungen

Die oben dargelegten Erfahrungen führten dazu, dass das vierte Symposium 2013 in der für das Organisationsteam und die PM-Community gewohnten Weise geplant und durchgeführt wurde.

4 Für eine Diskussion bezüglich der Organisationsform Hierarchie siehe Schuster 2010b.

Damit war der Fokus des Forschungsteams Schuster und Pircher – Kreindl hatte sich anders orientiert und das Team verlassen – wieder auf die Gruppenreflexion gerichtet. Als Neuerungen wurden 90 Minuten Zeitraum für die Reflexion veranschlagt, und die theoretische Bearbeitung des Rahmenthemas *Karriere im Projektmanagement*⁵ wurde unter Einbeziehung der von den TeilnehmerInnen in die Reflexion eingebrachten Erfahrungen erst nach dem Symposium durchgeführt. Beobachtet wurde die Gruppenreflexion von Pircher, die Aufgabe der Moderation hatte Schuster. Es zeigte sich, dass alle von den sieben TeilnehmerInnen der Gruppenreflexion 2013 besprochenen Themen (z.B. Zertifizierung, Eigenverantwortung von ProjektleiterInnen etc.) auch in der einschlägigen Fachliteratur zu finden waren. Dadurch konnten die partielle Verallgemeinerung der Gruppenreflexion mit den Fachdiskussionen der PM-Community verbunden und eine praxisnahe Betrachtung der Situation von Karriere im Projektmanagement dargelegt werden (Pircher/Schuster 2013: 30 ff.). Außerdem wurden das Design und der Ablauf von Schuster reflektiert (ebd. 27 ff.) und von Pircher vertiefend auf theoretische und praktische Aspekte der Beobachtung eingegangen (ebd. 38 ff.).

Die Gruppenreflexionen 2014 (7 TeilnehmerInnen, Beobachtung durch Pircher) und 2015 (5 TeilnehmerInnen, Beobachtung durch Pircher und Preßl) wurden im Plenum unter der Moderation von Schuster durchgeführt. Interessant für diese Chronologie ist 2015 die Erweiterung des Forschungsteams Pircher und Schuster durch Preßl, der innerhalb des DoktorandInnenkollegs für Interventionsforschung seine Dissertation erarbeitet hat und damit ebenso wie Schuster direkt mit der Klagenfurter Schule der Gruppen- und Organisationsdynamik verbunden ist.

Exkurs

Um den LeserInnen ein besseres Verständnis für die in dieser Arbeit angeführten Personenzahlen und die darauf beruhenden Entscheidungen zu vermitteln, wird im Folgenden kurz auf gruppenspezifische relevante Aspekte eingegangen.

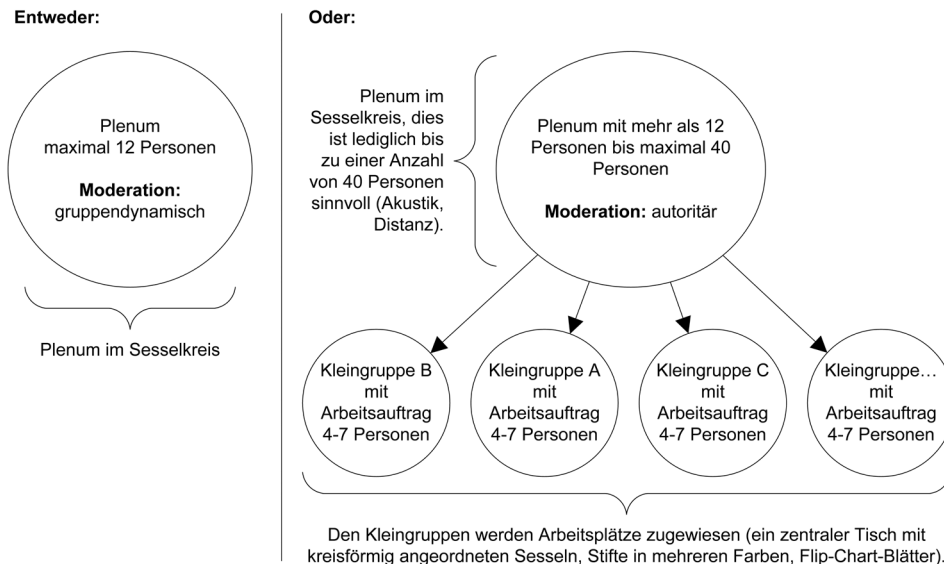
Eine Gruppe ist aus gruppenspezifischer Sicht arbeitsfähig, wenn diese fähig ist, selbständig zwischen agieren und reflektieren zu wechseln (vgl. Lackner 2008: 88). Gruppenspezifische Arbeitsfähigkeit ist per definitionem lediglich bis zu einer Maximalzahl von ca. 25 Personen möglich (vgl. Heintel 1977: 168), dies deshalb, weil zeitliche, räumliche und kommunikative Beschränkungen vorhanden sind. Kasenbacher (2003: 97) bringt diesbezüglich das quantitative Beispiel von „[...] 20.900 Milliarden Möglichkeiten [...] gegenseitiger Abstimmung oder Positionierung [...]“ bei einer Gruppe von 16 Personen. Was die Mindestzahl betrifft, so argumentieren König und Kasenbacher mit 3 Personen (2006: 15), im Gegensatz dazu verweist Heintel (vgl. 1977: 168) darauf, dass für einen differenzierten Meinungsbildungsprozess eine Gruppe aus zumindest fünf bis sechs Personen bestehen sollte, wobei er darauf hinweist, dass bereits bei zwei Personen ein Entlastungsraum gegeben sein kann. Sogenannte Trainingsgruppen, in welchen „[...] man

5 Die dazu gehörende Frage für die Gruppenreflexion lautete: Projektarbeit statt Karriere?

lernt, wie der Gruppenprozess und die eigene Position darin miteinander zusammenhängen [...]“ (Krainz 2006: 27) werden mit maximal zwölf Personen durchgeführt.

Bei der Gruppenreflexion, die im Wesentlichen aus Erkenntnissen bezüglich Trainingsgruppen entwickelt wurde, arbeitet der Moderator [R. J. S.] mit maximal 12 Personen im Plenum⁶ (Abbildung 4). Bei dieser Größenordnung wird eher gruppendynamisch moderiert, das heißt, ModeratorInnen verhalten sich ähnlich wie TrainerInnen von Trainingsgruppen und lassen die Gruppe möglichst selbständig arbeiten. Hat die Gruppenreflexion mehr als 12 TeilnehmerInnen, werden vom Moderator [R. J. S.] Kleingruppen gebildet und im Plenum wird eher autoritär moderiert, das heißt, es werden vermehrt Anweisungen gegeben. Für die Kleingruppen werden Arbeitsplätze, Stifte und Flip-Chart-Blätter vorbereitet, und es wird ein Arbeitsauftrag vergeben, ansonsten werden die Kleingruppen sich selbst überlassen. Die *gruppendynamische Arbeitsfähigkeit* der Kleingruppen kann sich entwickeln oder auch nicht.

Abbildung 4: Anordnungen auf Grund gruppendynamischer Gesichtspunkte



Die Beforschung dieser Kleingruppenprozesse war im Fall des PM Symposiums 2017 Ziel des Forschungsteams Schuster/Pircher/Preßl. Die teilnehmende Beobachtung und deren Reflexion im Rahmen der Gruppenreflexion 2017 fokussierte darauf, wie sich die zufällig generierten Kleingruppen verhalten und entwickeln und ob Dominanz- und Unterwerfungsphänomene zu beobachten sind (siehe diesbezüglich die Darlegung von Preßl unten).

Das Problem in der Vorbereitung zu dieser Art von Forschung liegt darin, dass die Anzahl der TeilnehmerInnen nicht im Voraus bekannt ist und eine Auswirkung auf zeitliche, räumliche Anordnung und die Art der Moderation hat. Hier zeigt sich auch die Notwendigkeit der *rollierenden Planung* bei Interventionsforschung. Das bedeutet, das Forschungsteam muss je nach tatsächlicher Gegebenheit bei der Gruppenreflexion die Planung entsprechend adaptieren bzw. im

⁶ Plenum bedeutet im Zusammenhang mit der Gruppenreflexion, dass es sich um einen Sesselkreis handelt.

Vorfeld mögliche Varianten abschätzen und entsprechende Vorkehrungen treffen (vgl. Krainer et al. 2012: 176). Es wird also erst im Moment des Geschehens klar, wie die räumliche Anordnung auszulegen ist und was beobachtet wird.

Ende des Exkurses.

2016 wurde der Ablauf des PM Symposiums dahingehend verändert, dass am Vormittag Vorträge zu je 40 Minuten vorgesehen waren und am Nachmittag Workshops zu je 90 Minuten abgehalten wurden. Die Gruppenreflexion war nun eines von vier Workshop-Angeboten am Nachmittag.⁷ Eine weitere Neuerung war, dass alle TeilnehmerInnen bezüglich der angebotenen Vorträge und Workshops kurze schriftliche Erläuterungen zu Ablauf und Inhalt erhielten.

Die Gruppenreflexion 2016 zum Thema *Entscheiden im Spannungsfeld von Schuldzuweisung und Schuldvermeidung* hatte 21 TeilnehmerInnen und wurde von Pircher beobachtet (Abbildung 5).

Abbildung 5: Plenum der Gruppenreflexion 2016 (Pircher beobachtend rechts oben)

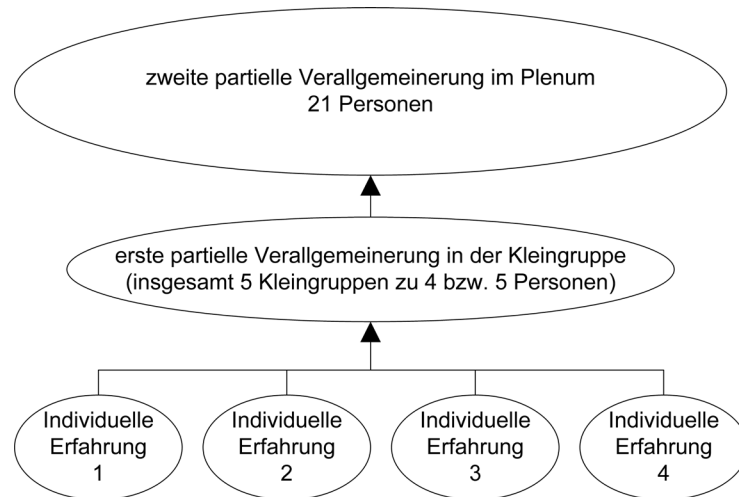


Die Anzahl der TeilnehmerInnen (21) erforderte eine Unterteilung des Plenums (Großgruppe) in fünf Kleingruppen zu 4x4 und 1x5 Personen. Die Kleingruppen erhielten den Auftrag, innerhalb von 30 Minuten individuelle Erlebnisse im Kontext von Schuldzuweisung und Schuldvermeidung auszutauschen und ein Flip-Chart mit Stichworten zu den gewonnenen Erkenntnissen zu produzieren.

⁷ In den vorhergehenden Symposien war die Gruppenreflexion am Vormittag parallel zu verschiedenen Vorträgen angesetzt. Damit war die Gruppenreflexion der einzige Workshop am Vormittag, während alle anderen Workshops am Nachmittag stattfanden. 2016 wurde dies insofern geändert als dass am Vormittag ausschließlich Vorträge und am Nachmittag ausschließlich Workshops stattfanden. Für die Gruppenreflexion war dies von großem Vorteil, weil dadurch auch die bei Vorträgen aufgenommene Theorie von den TeilnehmerInnen der Gruppenreflexion zeitnah reflektiert werden konnte.

Dieses Flip-Chart wurde dann von den jeweiligen Kleingruppen im Plenum präsentiert. Im Prinzip handelt es sich dabei um eine organisierte partielle Verallgemeinerung individueller Erfahrungen (Abbildung 6).

Abbildung 6: Organisierte partielle Verallgemeinerung individueller Erfahrungen



Die gruppenspezifisch motivierte Steuerung des Prozesses durch den Moderator war darauf ausgerichtet, dass ein organisatorischer Rahmen geboten wurde, der den TeilnehmerInnen diesen Erfahrungsaustausch ermöglichte (siehe dazu auch den Exkurs oben). Im konkreten Fall waren folgende Phasen⁸ zu berücksichtigen:

- die Begrüßungs- und Einleitungsphase (ca. 15 Minuten)
- die Kleingruppenarbeitsphase (ca. 30 Minuten)
- die Phase für die Präsentation der Kleingruppenergebnisse im Plenum (ca. 5 Minuten pro Kleingruppe) und
- die Zusammenfassungs- und Abschiedsphase (ca. 15 Minuten).

Bei der Gruppenreflexion 2017 war die Anzahl der TeilnehmerInnen mit 24 Personen ähnlich hoch wie bei jener 2016. Dementsprechend wurde dieselbe Vorgehensweise angewendet wie 2016. Dabei wurde zur Frage *Steuerung von Projekten mittels sozialer Kompetenz oder digitaler Analyse* im Kontext von Leitung bzw. Management von Projekten reflektiert.

Obwohl die Gruppenreflexionen 2014 und 2016 von Pircher und Schuster und 2015 von Pircher, Preßl und Schuster nachbearbeitet wurden, kam es diesbezüglich zu keiner weiteren Publikation. 2016 und 2017 gab es in Hinblick auf die interventionswissenschaftliche Zielsetzung der Vergemeinschaftung des Wissens der einzelnen TeilnehmerInnen mittels der Reflexion selbst die Neuerung, dass eine Zusammenfassung der Gruppenreflexion inklusive kommentiertem Flip-Chart-Protokoll an alle TeilnehmerInnen versandt wurde. Das Forschungsteam erhoffte sich dadurch, für die TeilnehmerInnen schlussendlich ein zusammenhängendes Ganzes zu generieren

⁸ In dieser Darlegung sind die Zeiten für die räumlichen Veränderungen der Personen implizit erfasst.

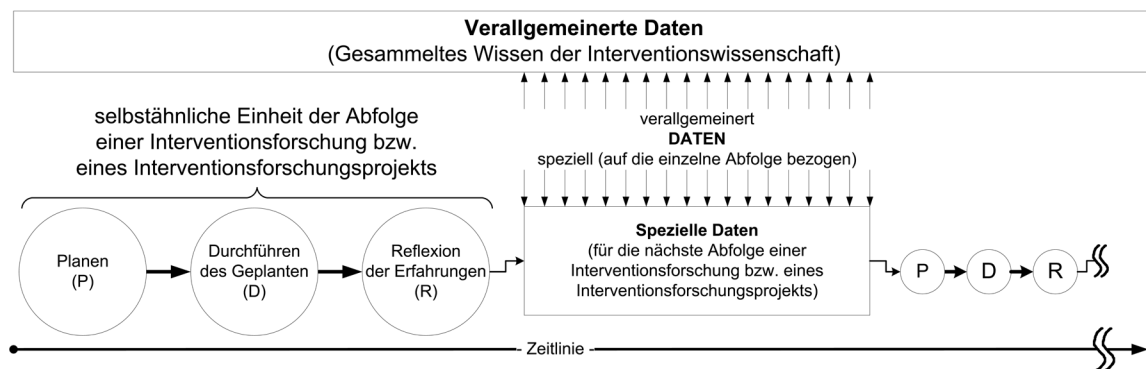
und den Gruppenreflexionsprozess damit – zumindest informell – sowohl in Bezug auf Form als auch auf Inhalt für alle Beteiligten transparent und im Gesamtzusammenhang zu präsentieren.

Mit der hier vorliegenden Publikation ist schlussendlich einerseits eine formelle Darlegung spezieller Geschehnisse 2017 und andererseits ein Überblick bezüglich des Einsatzes und der wissenschaftlichen Perspektive des Kommunikationsinstruments Gruppenreflexion über einen Zeitraum von sieben Jahren gegeben.

4. Zur Interventionswissenschaftlichen Perspektive der Gruppenreflexion

„Interventionswissenschaft akzeptiert, reflektiert und instrumentalisiert [...] die Wirkung von ForscherInnen auf das beforschte System und beschränkt sich sowohl örtlich als auch zeitlich“ (Schuster 2013a: 97). Außerdem ist zu beachten, dass auf Grund der Zielsetzung einer Selbstbewusstwerdung des beforschten Systems gewisse Erkenntnisse bzw. Daten lediglich für die von der jeweiligen Interventionsforschung Betroffenen relevant sind. Es geht der Interventionswissenschaft darum, mittels Interventionsforschung einen (Reflexions-)Prozess zu initiieren und zu begleiten, die Ergebnisse des (Reflexions-)Prozesses sind, die Freiheit der Forschung und des beforschten Systems vorausgesetzt, offen.

Abbildung 7: Interventionswissenschaft und -forschung



Quelle: vgl. Schuster 2016: 10

Diese Voraussetzung bedingt, dass der Prozess im Fokus der WissenschaftlerInnen ist und die jeweiligen in die Interventionsforschung integrierten Personen als ExpertInnen in Bezug auf den Inhalt angesehen werden. In der Realität ist diese Grenzziehung unweigerlich unscharf, da – je nach Spezialisierung – sowohl WissenschaftlerInnen über *inhaltliches* als auch von der Interventionsforschung Betroffene über *Prozess-Knowhow* verfügen. In Abbildung 7 ist das hier Argumentierte skizziert. Das *Planen (P)*, das *Durchführen des Geplanten (D)* und die *Reflexion der Erfahrungen (R)* werden als selbständige Einheiten von Interventionsforschung bzw. Interventionsforschungsprojekten gesehen. Beim Planen werden Faktoren wie der Kontext der Forschung, Merkmale der involvierten Persönlichkeiten, Interessenslagen etc. berücksichtigt. Die Durchführung des Geplanten ergibt die Möglichkeit eines Soll-Ist-Vergleichs, wobei mit *Soll* das geplante

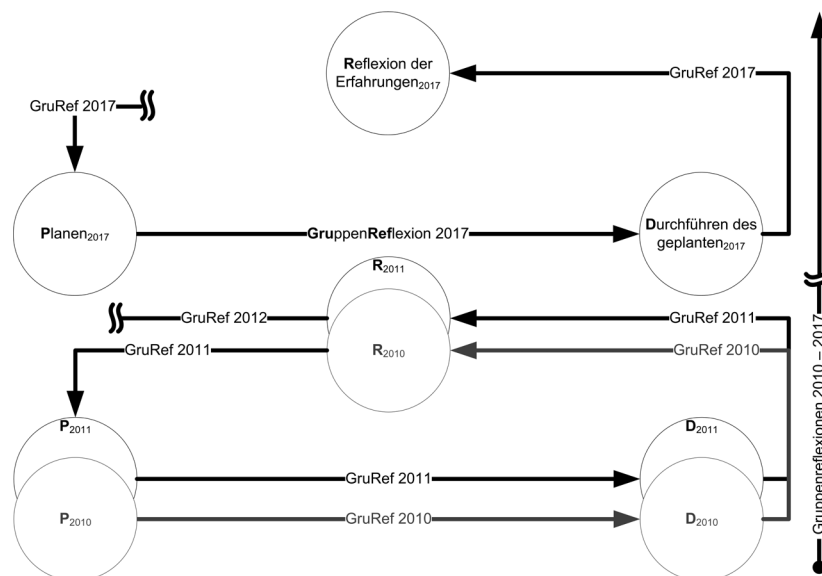
und mit *Ist* das tatsächliche Geschehen gemeint ist. Hier ist zu beachten, dass sich dies auf den Prozess und auf die Perspektive der InterventionsforscherInnen bezieht, nicht auf inhaltliche Ergebnisse, denn diese sind offen und haben damit kein *Soll*.

In Abbildung 8 ist der bisherige Prozess der Interventionsforschung *Gruppenreflexion* skizziert. Das dabei generierte Wissen lässt sich in folgende Kategorien einteilen:

- (1) Selbstbewusstwerdung der TeilnehmerInnen inklusive inhaltlich relevanter Erkenntnisse (siehe z.B. Pircher/Schuster 2013)
- (2) Wirkung der Moderation (siehe z.B. Pircher/Schuster 2013)
- (3) Wirkung des Settings⁹ (siehe z.B. Schuster 2013)

Der Beitrag von Preßl im vorliegenden Paper fokussiert auf (3) *Wirkung des Settings* und dabei auftretende gruppensdynamische Phänomene. Eine tiefgreifende Untersuchung von (1) *Selbstbewusstwerdung der TeilnehmerInnen inklusive inhaltlich relevanter Erkenntnisse* und von (2) *Wirkung der Moderation* ist in Planung.

Abbildung 8: Absolvierte Einheiten der Interventionsforschung Gruppenreflexion 2010–2017



Was die Wirkung der Gruppenreflexion selbst bzw. des gesamten PM Symposiums betrifft, so gibt es aus gruppensdynamischer Perspektive einige Grundannahmen (vgl. Schuster 2010a: 16-19). Diese Grundannahmen ergeben sich aus den im Laufe der Zeit gewonnenen Erkenntnissen und werden im Prozess der Interventionsforschung zu Hintergrundtheorien verarbeitet. Krainer et al. formulieren dazu allgemein, dass „[i]n der Interventionsforschung [...] Theorien entwickelt [werden], die Themen oder Hintergrunddimensionen, die im Praxisfeld implizit vorhanden sind, in aller Regel aber nicht explizit thematisiert werden, veranschaulichen sollen“ (Krainer et al.

⁹ Unter *Setting* wird hier sowohl die räumliche und zeitliche Strukturierung als auch die Anzahl der beteiligten Personen und das Thema bzw. Ziel einer Veranstaltung verstanden. Das *Setting* ist eine wesentliche Intervention im Sinne der Interventionswissenschaft und steht dementsprechend im Fokus der Interventionsforschung.

2012: 223). Um im konkreten Fall der PM Symposien einen möglichst kompakten Überblick zu schaffen, werden die Aspekte Chaos, Ordnung, Komplexität und Strategeme betrachtet, die mittels der *Settings* Plenum (Großgruppenreflexion), Kleingruppenreflexion, Vortrag, Podiumsdiskussion und Pausen in unterschiedlicher Weise zur Wirkung kommen. Ein wesentlicher Punkt für die Wirkung des gesamten Symposiums sind die *Relationen* der einzelnen Settings zueinander. Insgesamt handelt es sich dabei um die aus der Erfahrung und Erforschung von mittlerweile 9 Gruppenreflexionen im Gesamtkontext der PM Symposien gewonnene Hintergrundtheorie.

Der **Aspekt Chaos** wird hier organisatorisch nicht im Detail fassbar bzw. nicht im Detail lenkbar definiert. Trotz der fehlenden Lenkbarkeit kann davon ausgegangen werden, dass es sich bei dem im Kontext des PM Symposiums betrachteten Chaos um ein deterministisches handelt. Deterministisch ist dieses Chaos deshalb, weil die jeweilige Kultur ordnend wirkt und individuelles Verhalten dadurch zwar nicht im Detail fassbar, jedoch auch nicht völlig offen ist. Konkret handelt es sich bei den TeilnehmerInnen um eine selektierte Community mit zumindest grob eingegrenztem Interessensgebiet, nämlich Projektmanagement.

Unter dem **Aspekt Ordnung** wird der Grad an Eindeutigkeit der räumlichen und zeitlichen Gegebenheiten verstanden. Das bedeutet, je größer die Ordnung, desto klarer ist allen Personen im Raum deren Rolle und deren räumliche und hierarchische Position. Das geht so weit, dass für spezielle Gäste Zettel mit deren Namen auf meist in der ersten oder zweiten Reihe befindliche Stühle platziert werden. So hat z.B. das Format *Vortrag* deshalb eine relativ hohe Ordnung, weil die räumliche und zeitliche Situation des bzw. der Vortragenden und der ZuhörerInnenschaft klar geregelt ist, außerdem sind die Sessel in sogenannter Kinoanordnung. Die implizite Botschaft ist, dass das Wissen durch die vortragende Persönlichkeit auf der Bühne und das Nichtwissen durch das Auditorium vor dieser Bühne verkörpert ist.

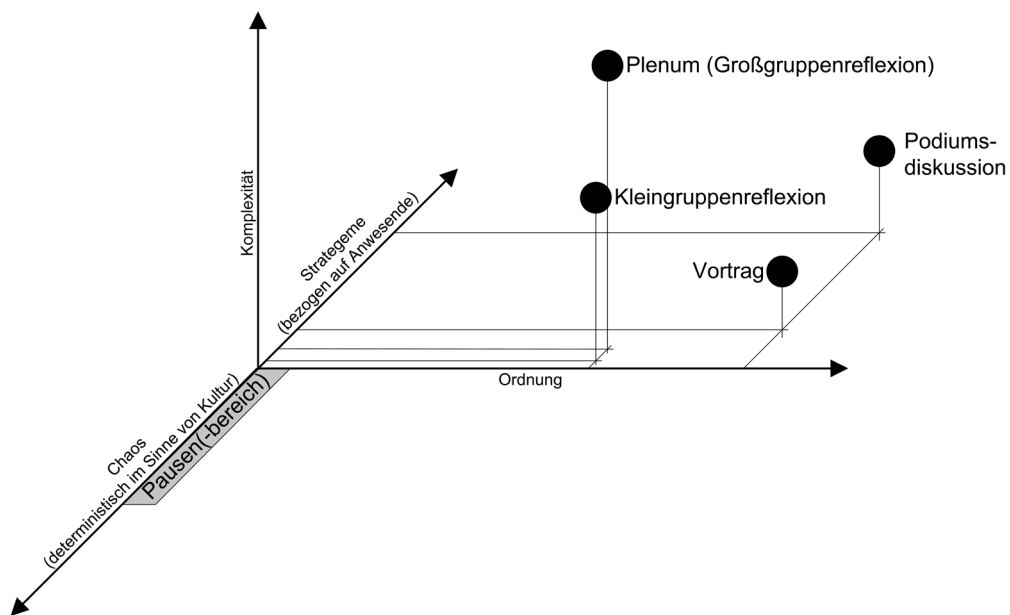
Der **Aspekt Komplexität** ist dadurch gekennzeichnet, dass bei gleicher oder geringerer Ordnung ein höherer Grad an Variationen der räumlichen und zeitlichen Gegebenheiten möglich ist. So ist z.B. bei einer Podiumsdiskussion mit mehreren Gästen am Podium die Verteilung der Redezeit nicht mehr so eindeutig wie bei einem Vortrag einer einzelnen Person. Deshalb werden bei Podiumsdiskussionen auch ModeratorInnen eingesetzt, die unter anderem auf die gleiche Verteilung der Redezeiten der Podiumsgäste zu achten haben. Dieses Beispiel zeigt, dass sich bei Verringerung von Ordnung im hier verstandenen Sinne die Notwendigkeit einer ordnenden Funktion während des sozialen Prozesses ergibt. Der Vorteil von Komplexität gegenüber Ordnung ist die höhere Verarbeitungs- bzw. Anpassungsfähigkeit, der Nachteil der höhere Bedarf ordnender Funktionen.

Unter dem **Aspekt der Strategeme** (vgl. Senger 2003: 441-442) wird ein organisatorisch nicht fassbares bzw. lenkbares Verhalten definiert, das – im Gegensatz zum Chaos – auf die Organisation (z.B. des PM Symposiums) abzielt. Damit ist gemeint, dass Personen zielgerichtete Handlungen setzen, um etwas in ihrem Interesse zu erreichen, das außerhalb des Rahmens der offiziellen Settings liegt. Wobei hier dem Verständnis gefolgt wird, dass „Strategeme [...] bloße Werkzeuge [sind]. Bei Werkzeugen wird nicht zwischen <moralisch guten> und <moralisch

schlechten>, sondern einzig und allein zwischen <brauchbaren> und <unbrauchbaren> unterschieden. Mit Strategemen verhält es sich wie mit einem Küchenmesser, mit dem man Gemüse zurechtschneidet. Wir beurteilen das Messer einzig unter dem Gesichtspunkt, ob es scharf geschliffen und daher gut zu gebrauchen sei. Niemand wird sagen, es sei ein moralisch gutes Messer, wenn man es zum Gemüseschneiden braucht, aber ein moralisch böses Messer, wenn man damit eine Untat begeht“ (Yu Xuebin zitiert in Senger 2004: 26).

Werden die Settings nun unter Einbeziehung der angeführten Aspekte betrachtet, so ergeben sich folgende Relationen unterschiedlicher Settings zueinander bzw. zum PM Symposium insgesamt (Abbildung 9).

Abbildung 9: Relationen unterschiedlicher Settings zueinander bzw. zum PM Symposium



Pausen und deren Relation zum PM Symposium

In Bezug zu den Pausen ist eine gruppensdynamische Vorannahme, dass diese insbesondere auf Grund der Möglichkeit der Psychohygiene relevant sind. Der Pausenbereich überspannt ein Feld geringer Ordnung und geringer Komplexität und ist organisatorisch inhaltlich nicht fassbar, da TeilnehmerInnen völlig frei entscheiden wofür die Pausen genützt werden. Dies ist gruppensdynamisch deshalb interessant, weil davon ausgegangen wird, dass TeilnehmerInnen diese Freiheit z.B. dazu nützen, sich bei Bedarf an andere zu wenden, um eventuell angestauten psychischen Stress loszuwerden. Mit Pausen ist damit die Bedingung für die Möglichkeit von Psychohygiene oder allgemeiner Erholung gegeben.

Vorträge und deren Relation zum PM Symposium

Was das Setting Vortrag betrifft, so ist dieses von hoher Ordnung und beinhaltet geringe Freiheiten sowohl der jeweiligen Vortragenden als auch der TeilnehmerInnen, damit ist auch die

Komplexität eher gering. Der Vortrag dient dazu, gewünschtes normatives Wissen an die TeilnehmerInnen weiterzugeben. Gewünscht ist in dem Sinne gemeint, dass jeder Vortrag eine inhaltliche Auswahl hauptsächlich aus Sicht der VeranstalterInnen und – zumindest innerhalb des von den VeranstalterInnen gewährten Rahmens – auch aus Sicht der Vortragenden darstellt. Die TeilnehmerInnen haben lediglich die Wahl, den Vortrag anzuhören oder nicht. Was den Aspekt der Strategeme in Bezug zum Vortrag betrifft, so können Vortragende diesen dazu nützen, eigene z.B. wirtschaftliche Interessen dadurch zu stützen, dass sie ungünstige Perspektiven vernachlässigen und den Fokus des Vortrags entsprechend ausrichten. Was die TeilnehmerInnen betrifft, so können diese am Vortrag teilnehmen, jedoch dabei z.B. E-Mail-Schriftverkehr am Smartphone erledigen. Dadurch haben TeilnehmerInnen vordergründig Interesse bekundet und den Vortrag angehört bzw. angesehen, eigentlich jedoch eigene Interessen verfolgt. Für solche Inszenierungen eignen sich Vorträge sehr gut. Eine Inszenierung dieser Art ist durchaus plausibel, da für die Teilnahme am PM Symposium ein Zertifikat vergeben wird, das bescheinigt, dass TeilnehmerInnen ihr Fachwissen erweitert oder zumindest aufrechterhalten haben. Dadurch erhält das Zertifikat an sich einen Eigenwert und ist für TeilnehmerInnen interessant, egal, ob der betreffende Vortrag interessant ist bzw. rezipiert wird oder nicht.

Podiumsdiskussionen und deren Relation zum PM Symposium

Das Setting Podiumsdiskussion hat im Vergleich zu jenem des Vortrags bereits höhere Komplexität bei nahezu gleicher Ordnung. Die Tatsache, dass mehrere Podiumsgäste diskutieren, beinhaltet mehr Freiheiten in Bezug auf die behandelten Themen und auch in Bezug auf die jeweilige Perspektive dazu. Der Vorteil für das Publikum liegt in der Erweiterung der Perspektiven und in der dadurch im Vergleich zum Vortrag komplexeren Erfassung eines Sachgebietes. Um die Podiumsgäste zu koordinieren, ist für dieses Setting eine Moderation notwendig. Das bedeutet, dass bei diesem Setting der Prozess stärker in den Vordergrund rückt als bei jenem des Vortrags und dass Inhalts- und Prozessverantwortung getrennt werden. Auf Seiten der Podiumsgäste ergibt sich ein größerer Spielraum für Strategeme, die auf das Publikum, den/die VeranstalterIn oder auf andere Podiumsgäste abzielen können. Die möglichen Strategeme auf Seiten der TeilnehmerInnen sind ident mit jenen beim Vortrag.

Kleingruppenreflexionen und deren Relation zum PM Symposium

Die Kleingruppenreflexion¹⁰ hat gegenüber den Settings Vortrag und Podiumsdiskussion geringere Ordnung und höhere Komplexität. Da vier bis fünf Personen im Sesselkreis oder um einen Tisch verteilt sitzen und sich alle nach Belieben in die Diskussion einbringen, ist der Datenfluss frei und der Verlauf des Gesprächs offen, weil sich Änderungen in den individuellen Gedankengängen ergeben können. Im besten Fall handelt es sich bei Kleingruppenreflexionen um ein gemeinsames Nachdenken aller Beteiligten. Die Ordnung ist durch die vom Moderator bestimmten Bedingungen, nämlich Aufgabenstellung, räumliche Anordnung, Zeitrahmen, Zusammensetzung der Gruppe und Gruppengröße gegeben. Da die Aufgabenstellung inhaltlich mit dem

¹⁰ Mit Kleingruppen sind hier jene vier bis sieben Personen umfassende Gruppen gemeint, die selbständig eine vom Moderator des Plenums vergebene Aufgabenstellung bearbeiten.

Rahmenthema des PM Symposiums verknüpft ist, die TeilnehmerInnen bereits verschiedene inhaltliche Vorträge besucht haben und selbst im Bereich PM tätig sind, kann davon ausgegangen werden, dass genügend Know-how in den Kleingruppen vorhanden ist. Der Raum für individuelle Strategeme ist im Vergleich zu Vortrag und Podiumsdiskussion kleiner, da über den Inhalt und die intensive persönliche Involvierung eine sehr starke Fokussierung vorhanden ist. Man kann es auch so interpretieren, dass sich jede(r) höchstwahrscheinlich intensiv einbringt und damit auch Strategeme anwendet, die jedoch auf Grund des Kontextes mit der Aufgabenstellung verbunden und damit der Sache, nämlich das PM bezogene Wissen der TeilnehmerInnen zu erweitern, dienlich sind.

Plena und deren Relation zum PM Symposium

Das Plenum (die Großgruppenreflexion)¹¹ ist von größerer Komplexität als die Kleingruppenreflexion bei in etwa gleicher Ordnung. Aufgrund der zeitlich bedingten Notwendigkeit der Reduktion von Sprechzeiten wählen die meisten Kleingruppen PräsentatorInnen, die ihre Ergebnisse im Plenum darlegen¹². Meistens geben die restlichen Personen der Kleingruppe bei Bedarf noch zusätzliche Kommentare ab bzw. wurden diese vom Moderator darauf angesprochen. Insgesamt kann von einer Verdichtung der in den jeweiligen Kleingruppen gewonnenen Erkenntnisse gesprochen werden (Abbildung 6). Dabei bleiben die Details der in den Kleingruppen verarbeiteten Inhalte auf der Strecke. Durch die zeitliche Anordnung *Plenum-Kleingruppen-Plenum*¹³ wird für die Beteiligten deutlich, dass ab einer gewissen Anzahl von Personen für ein direktes sprachliches Verarbeiten von Themen Verdichtungsstufen sinnvoll sind. Außerdem zeigt sich, dass im Plenum der Einsatz von SprecherInnen eine organisatorische Erleichterung bringen kann, gleichzeitig wird dadurch jedoch auch eine Differenz etabliert, die in der Kleingruppe vor dem Auftritt im Plenum noch nicht vorhanden war. Diese Tatsache bringt es mit sich, dass das Plenum eine erhöhte Wahrscheinlichkeit für Strategeme beinhaltet (siehe dazu den Beitrag von Preßl unten). Die Differenz besteht darin, dass sich zusätzlich zur Sachdimension der Kleingruppe die Dimension der Positionierung der Sache der Kleingruppe gegenüber anderen Kleingruppen und gegenüber den ModeratorInnen ergibt. Außerdem ergibt sich für jenes Gruppenmitglied, das im Plenum die Ergebnisse der Kleingruppe präsentiert, die Möglichkeit, sich individuell zu positionieren. Interessant ist diesbezüglich das von Preßl unten dargelegte, unterschiedliche Verhalten der KleingruppenleiterInnen A_1 und B_1 . Da im Vergleich zu den Settings Vortrag und Podiumsdiskussion auch das Plenum (Großgruppenreflexion) wesentlich interaktiver ist und damit die behandelten Themen stärker mit allen beteiligten Personen verknüpft sind, ist zu vermuten, dass eingesetzte Strategeme eher der Sache der Wissensvermehrung dienen und weniger dazu, grundlegende Zielsetzungen des PM Symposiums zu unterlaufen. Ein wichtiger Aspekt dabei ist auch, dass – zumindest innerhalb der jeweils betroffenen Kleingruppe – Strategeme von Gruppenmitgliedern leichter zu identifizieren sind.

11 Für ausführlichere gruppenspezifische Hintergründe zu Moderation, zeitlicher und räumlicher Gestaltung der Gruppenreflexion siehe den Exkurs auf Seite 8.

12 Bei den bisherigen Gruppenreflexionen wurde diesbezüglich keine Vorgabe durch den Moderator gegeben.

13 Die Notwendigkeit für diese Anordnung ergab sich erstmals beim PM Symposium 2016 (siehe oben).

Im Folgenden wird von Preßl das konkrete Geschehen in zwei Kleingruppen, nämlich A und B, und das Verhalten der RepräsentantInnen (PräsentatorInnen) dieser Kleingruppen im Plenum, nämlich A₁ und B₁ dargelegt und analysiert.

5. Darlegung und Interpretation der Beobachtung von Preßl (K. P.)

Im konkreten Fall – die Gruppenreflexion am 7. Juni 2017 im Rahmen des 8. PM Symposiums der FH des BFI Wien „Steuerung von Projekten mittels sozialer Kompetenz oder digitaler Analyse“ – wurden die Geschehnisse in den Kleingruppen A und B durch den Beobachter Preßl und die Beobachterin Pircher erfasst und schriftlich festgehalten. Auf Basis der erstellten Notizen wurden zeitnah Beobachtungsprotokolle angefertigt und während einer am 12. Juli 2017 durchgeführten Resonanzgruppe (vgl. Schuster 2016a: 183) – zusammengesetzt aus Pircher, Preßl und Schuster – analysiert.

Im Fokus der hier dargelegten Verarbeitung der Analyse der Resonanzgruppe durch K. P. stand der Aspekt von informellen Dominanz- und Unterwerfungsphänomenen in den beobachteten Kleingruppen A und B und die Darlegung möglicher theoretischer Konzepte zum Verständnis der beobachteten Phänomene. Grimm und Krainz verweisen dahingehend, dass das „Ganze einer Gruppe [...] nicht aus der Summe der Individuen in dieser Gruppe [besteht], sondern aus der Relation dieser Beziehungen zueinander. Und weil ‚Beziehungen‘ etwas schwer greifbar klingt, hält man sich an die leichter beobachtbaren Kommunikationen beziehungsweise Interaktionen, welche die Individuen miteinander verknüpfen“ (Grimm & Krainz 2011: 9).

Nach einer kurzen Vorstellungsrunde im Plenum wurden vom Moderator das Setting der Gruppenreflexion und der Auftrag an die noch zu bildenden Kleingruppen erklärt. Danach wurden die einzelnen Kleingruppen per Zufall gebildet und auf die vorbereiteten Arbeitsplätze verteilt.

Lackner bezeichnet den Auftrag als das „erste gemeinsame, die Gruppe verbindende Element“ (Lackner 2008: 85). Die Anzahl von ausgewählten – eventuell sich fremden – Personen, welche miteinander an einem Auftrag arbeiten sollen, kann noch nicht als Gruppe bezeichnet werden, „sondern [als] n Personen mit einem Auftrag“ (ebd. 2008: 85). In weiterer Folge führt Lackner (2008: 86) das Bilden von Beziehungen oder Relationen als weitere Bedingung für die Gruppenbildung an und beschreibt die Gruppenaktivität als „Wechselspiel zwischen agieren und reflektieren [...] auf zwei Ebenen: [...] Handlungsebene und [...] Steuerungsebene“ (ebd. 2008: 88). Hierbei ist es wichtig, nicht nur auf der Handlungsebene – auf jener Ebene, bei der sich die Gruppe mit der Aufgabenstellung befasst – zu verharren, sondern den Prozess selbst zu analysieren und das heißt wiederum, dass die Gruppenmitglieder „beobachten, benennen und beschreiben, besprechen und Sichtweisen vergemeinschaften, interpretieren und diagnostizieren, Schlussfolgerungen ableiten und die jeweiligen Konsequenzen auf der Handlungsebene anwenden“ (ebd. 2008: 88).

Bei den zwei beobachteten Kleingruppen A und B zeigten sich trotz gleicher Ausgangslage unterschiedliche gruppenspezifische Verläufe. Nachdem die Kleingruppen A und B sich jeweils um zwei vorbereitete Tische formiert hatten, konnte bei beiden Gruppen ein Annähern und Kennenlernen der Gruppenmitglieder durch das Austauschen individueller (beruflicher) Erfahrungen und der Darstellung von eigenen persönlichen Zugängen zur Thematik beobachtet werden. Grimm und Krainz (2011: 21) sprechen hierbei von „Warming-“ und „Forming-Phase“ mit dem Ziel des Festlegens einer gemeinsamen Systemidentität, erster Strukturen, Rollen und auch Einschränkungen für die Gruppe.

In der Kleingruppe A mit insgesamt 6 Personen (3 Frauen, 3 Männer) übernahm ein Gruppenmitglied, nämlich A₁, schnell die Leitung über die Gruppe, indem es ausführlich und selbstbewusst seine persönlichen Erfahrungen zur Thematik darlegte. Anschließend nahm eine zweite Person (A₂) zu den Aussagen ihres Vorredners Stellung und es kam zu einem Dialog zwischen diesen beiden Personen; die restlichen vier Gruppenmitglieder wurden in das Gespräch nicht eingebunden. Die beiden Gruppenmitglieder (A₁ und A₂) äußerten ihre Meinungen zum Gegensatz „soziale Kompetenz versus digitale Analyse“ und die anderen vier Gruppenmitglieder waren lediglich ZuhörerInnen. Erst nachdem Person A₃ die anderen Gruppenmitglieder aufforderte, das vorgegebene Thema doch vielschichtiger und fachlich fundiert zu diskutieren, stoppte zum einen der Erfahrungsaustausch zwischen den Personen A₁ und A₂ und zum anderen beteiligten sich die anderen Gruppenmitglieder an der Diskussion. Die Diskussion selbst wurde vielfältiger, sachlich und theoretisch tiefergehend.

Person A₃ – gewissermaßen die Rebellin [K. P.] – brachte die Veränderung innerhalb der Gruppe: Einerseits widersprach sie ihren Vorrednern (A₁ und A₂), andererseits motivierte sie die anderen KollegInnen, aktiv zu werden. Darüber hinaus sprach sich Person A₃ für eine Verbindung von Theorie und Praxis aus – man solle doch theoretische Erläuterungen zur Untermauerung praktischer Erfahrungen darlegen. In ihren Äußerungen wurde sie von zwei Gruppenmitgliedern (A₄ und A₅) unterstützt, die sich bis dahin nicht an der Diskussion beteiligt hatten. Dieser Umstand führte dazu, dass drei Gruppenmitglieder nun geschlossen gegen die Argumente des anfänglichen Gesprächsführers A₁ (z.B. *generelle Ablehnung von digitalen Analysen im Rahmen der Projektabwicklung*) vorgingen. Und das Argument – *Technologien können die praktische Arbeit im Rahmen der Projektabwicklung unterstützen und eine angemessene automatisierte Unterstützung zeigt sich für das Projektmanagement förderlich und trägt zur methodischen Sicherheit bei* – wurde dann von zwei Dritteln der Gruppenmitglieder getragen und fand beim späteren Vortrag im Plenum ebenfalls Bestätigung. Die Beziehung zwischen A₃, A₄, und A₅ hielt jedoch nur bis zur Frage, wer im Plenum die Gruppenergebnisse präsentieren möchte. Ein derartiges „Auflösen“ deckt sich mit der Aussage von Grimm und Krainz (2011: 19), die darauf hinweisen, dass besonders Interaktionen zwischen Individuen – sogenannte Personen-Personen-Beziehungen – sich dann auflösen, wenn kein Nutzen an den Beziehungen mehr gesehen wird.

Die Präsentation im Plenum übernahm A₁; A₁ bekam durch seinen Vorstoß bzw. durch die Passivität der anderen Gruppenmitglieder die Gelegenheit, Gruppe A im Plenum zu repräsentieren. Auffallend war, dass ein Großteil seiner Präsentation daraus bestand, seine eigenen Ansichten

(z.B. *Soziale Kompetenz kann von der Digitalisierung nicht abgelöst werden. Entscheidungen sollen sich auf praktische Erfahrungen stützen und nicht auf generierte Algorithmen.*) aus der vorigen Gruppendiskussion zu wiederholen, ohne die zusätzlichen Aussagen seiner Gruppenmitglieder zu erwähnen.

Mit dem Zusatz „*Wir haben uns darüber verständigt.*“ bzw. „*Das waren unsere Gedanken.*“ wurde von A₁ gegenüber dem Plenum der Eindruck von gemeinsam erarbeiteten Gruppenergebnissen erweckt, was jedoch nur teilweise den Tatsachen entsprach. Die im Plenum von A₁ vorgestellten Erkenntnisse spiegelten Großteils *nicht* die Ergebnisse der Gruppendiskussion der Gruppe A wider. Aus Perspektive des Beobachters K. P. agierte A₁ im Plenum als eine den Rest der „n Personen“ (Lackner 2008: 85, siehe auch das Zitat oben) in Gruppe A unterwerfende Autorität. Insbesondere war für den Beobachter interessant, dass keines der anderen Mitglieder der Gruppe A die Aussagen von A₁ im Plenum korrigierte oder ergänzte.

Auch in der Kleingruppe B (6 Personen; 4 Frauen und 2 Männer) übernahm ein Gruppenmitglied (B₁) die Leitung, doch im Gegensatz zur Kleingruppe A wurde diese Rollenübernahme von den anderen fünf Gruppenmitgliedern anfangs unterstützt; die Wortmeldung von B₁, welche gleichzeitig eine Zeitplanung beinhaltete, symbolisierte den Anfang. „So wie der Erste [bzw. die Erste] beginnt, wird die ‚Runde‘ fortgeführt“ (Lackner 2008: 85) – nacheinander berichtete jedes Gruppenmitglied einzelne Erfahrungen zur Thematik. Die anfangs sehr strukturierte Herangehensweise an die Aufgabenstellung und die Art der Kommunikation der Kleingruppe B – jede/r äußerte seine/ihre Meinung zum Thema – änderten sich, als erste Untergruppen in den Vordergrund rückten und ein Nebeneinander-Arbeiten bzw. -Sprechen erkennbar wurde. Ein kollektiver Austausch von Erfahrungen war mit Ausnahme der ersten Gesprächssequenz nicht erkennbar, es zeigten sich vielmehr einzelne Dialoge, bei denen zwei oder drei Personen abwechselnd ihre Erfahrungen äußerten und B₅ und B₆ waren während der gesamten Gruppenarbeit größtenteils inaktiv. Neben den Gesprächen wurde das geforderte Flip-Chart, welches die Hauptaussage der Gruppe darlegte, nämlich „soziale Kompetenzen (Hinweis auf die Pluralform) UND digitale Analyse“, von B₁ und B₂ (beharrlich) angefertigt. Beide Faktoren wurden mittels Pro-Contra-Technik analysiert und gemäß Aufzählungen wie z.B. *Bauchgefühl, Teamgeist, Dokumentation* lag der Fokus auf praktischen Erfahrungen mit sozialen Kompetenzen und digitaler Analyse und einem *Sowohl-als-Auch*. Kleingruppe B (unter der Leitung von Gruppenmitglied B₁) arbeitete stark produktorientiert mit dem Flip-Chart als Produkt, dementsprechend zeigte sich eine zielgerichtete, zweckmäßige Diskussion (vor allem zwischen B₁ und B₂). Nachdem B₁ und B₂ fast schon eigenständig das Flip-Chart angefertigt hatten, ersuchten beide Personen die restlichen Gruppenmitglieder um ein Feedback und so wurde durch eine kollektive Gruppenreflexion aus einer Einzelarbeit von B₁ und B₂ eine Gruppenleistung.

In Analogie zu Gruppe A übernahm auch in Gruppe B das aktivste Gruppenmitglied, nämlich B₁, die Präsentation der Gruppenergebnisse im Plenum. Richtet man den Blick auf die jeweils leitenden Gruppenmitglieder (A₁ und B₁), so stellen sich Fragen nach einer grundsätzlichen Verbindung zwischen Führung, Macht bzw. Dominanz, Unterwerfung und deren Auslegung (z.B.

Sind LeiterInnen unweigerlich dominant und kann man „dominant“ mit dem Adjektiv „zielbewusst“ umschreiben?).

Obwohl A_1 und B_1 in den Kleingruppen unterschiedlich auftraten, weisen beide ein starkes Machtbedürfnis auf, wobei A_1 in seinem Verhalten klar autoritär war und schlussendlich im Plenum hauptsächlich eigene Ansichten darlegte, diese jedoch als Gruppenergebnis verschleierte. Das Eingreifen von A_3 hat zwar innerhalb der Gruppe einen Diskussionsprozess ermöglicht, der jedoch im Plenum von A_1 völlig negiert wurde. Im Gegensatz dazu bewirkte die Leitung durch B_1 eine starke Fokussierung von Gruppe B auf die Aufgabe. Die eher zurückhaltende, die Zustimmung der Gruppe einholende Autorität von B_1 spricht für einen höheren Reifegrad der Gruppe B, wobei das starke Zuständigkeitsbedürfnis von B_1 für das Erreichen des Ziels des Arbeitsauftrags nach Franken (2007: 95) ebenfalls für ein starkes Machtbedürfnis spricht.

Gruppendynamiken der Kleingruppen A und B während der Diskussionen bestärken die These Königs, dass „Macht und alle damit zusammenhängenden Phänomene [...] eine Eigentümlichkeit von Beziehungen und nicht eine Eigenschaft bzw. ein Besitz von Personen oder eine Eigenschaft von aktorslosen Systemen oder Strukturen“ (König, 2007, S. 19) sind. Dementsprechend weisen insbesondere die Beziehungen zwischen A_1 , A_2 und A_3 Dominanz- und Unterwerfungsphänomene auf, wobei auch die Zurückhaltung von A_4 , A_5 und A_6 als Unterwerfung gedeutet werden kann.

Insgesamt war das Verarbeiten der Fremdheit der Personen auf der Steuerungsebene bei gleichzeitigem Abarbeiten des Arbeitsauftrags auf der Handlungsebene (Lackner, 2008: 88) für beide Gruppen eine Herausforderung. Ansatzweise kann von teilweise durchlaufenen *Warming-* bzw. *Forming-Phasen* gesprochen werden, durchzogen von *Dominanz-* bzw. *Unterwerfungsverhalten* der beteiligten Personen. Dabei wurde Gruppe A im Gegensatz zu Gruppe B stärker autoritär (A_1) geführt bzw. hat Gruppe A sich der von A_1 agierten Autorität – trotz eines wahrnehmbaren Augenblicks des Widerstands – stärker unterworfen. Gruppe B scheint unter der Moderation von B_1 einem kollektiv unbewussten Aufgabenprimat gefolgt zu sein, das dazu führte, dass sich innerhalb der Gruppe je nach Einstellung und Aufgabenbewusstsein der einzelnen Gruppenmitglieder Untergruppen formierten, die aber anschließend unter der Leitung von B_1 die festgehaltenen Einzelaussagen als Gruppe reflektierten und ergänzten.

Weder in Kleingruppe A noch in B konnte in der gegebenen Zeit ein Konsens zwischen den Gruppenmitgliedern erzielt werden. Dies deckt sich mit der Argumentation von Heintel und Krainz (2011: 116), dass Gruppenentscheidungen und insbesondere Konsensentscheidungen viel Energie und Zeit benötigen. Die im konkreten Fall gegebenen ca. 30 Minuten für sechs einander fremde Personen waren für das Erarbeiten eines Konsenses nicht ausreichend.

6. Die Methode der psychodynamischen Organisationsbeobachtung und ihre Relevanz in der Lehrpraxis für ProjektmanagerInnen (Pircher)

Basierend auf den Erfahrungen des Einsatzes der psychodynamischen Organisationsbeobachtung bei den PM Symposien an der FH des BFI Wien¹⁴ begann die Autorin, die Methode auf die Lehrpraxis zu übertragen.¹⁵ Nach Krainer und Lerchster (2012: 10) sollen „Praxissysteme durch Interventionsforschung Unterstützung auf ihrem Weg zu kollektiver Selbstreflexion und Aufklärung erhalten.“ Durch den Einsatz der Interventionsforschung sollen Prozesse der Selbstreflexion angeregt werden, was umso besser gelingen kann, je differenzierter ein System über sich selbst Bescheid weiß. Die Interventionsforschung bietet an dieser Stelle eine durch Forschungsarbeit erhobene Innen- und Außensicht (vgl. Krainer/Lerchster 2012: 13). Eine Methode, um diese Innen- bzw. Außensicht auf ein System zu bekommen, ist die psychodynamische Organisationsbeobachtung.

Bevor die Autorin im Folgenden auf die Implementierung der psychodynamischen Organisationsbeobachtung in die Lehrpraxis eingeht, möchte sie ein Beispiel geben, warum das Kennenlernen der Methode für die Berufspraxis der StudentInnen des Bachelorstudienganges „Projektmanagement und IT“ von hoher Bedeutung ist.

Schauen wir uns konkret die Anforderungen an, die die IPMA (International Project Management Association) an zertifizierte ProjektmanagerInnen stellt. Als Teil der Zertifizierungsprüfung müssen die ProjektmanagerInnen Know-how in Kompetenzen auf Grundlage der IPMA Kompetenzrichtlinie (ICB) in der derzeit aktuellen Version 4.0 nachweisen. Die Kompetenzen sind in drei Kompetenzbereiche gegliedert: Kontext Kompetenzelemente („Perspective“), persönliche und soziale Kompetenzelemente („People“) sowie technische Kompetenzelemente („Practice“). Wenn wir uns nun im Bereich „Persönliche und soziale Kompetenzelemente“ die einzelnen Kompetenzen anschauen, so wird dort – je nach Zertifizierungslevel der Zertifizierungsprüfung – theoretisches wie praktisches Wissen in den Bereichen Selbstreflexion und Selbstmanagement, Konflikte und Krisen, Führung oder Teamarbeit usw. mit unterschiedlichen Methoden überprüft (vgl. ICB 4.0 2015: 15 ff.).

Gerade das Lehren und Erlernen von *Social Skills* für die Berufspraxis sieht die Autorin als eine Herausforderung, sowohl aus der Rolle der Lehrenden heraus, als auch aus Sicht der Rolle der Studierenden. Qualitativ hochwertige Literatur, um sich theoretisches Grundwissen in diesem Bereich anzueignen, ist in umfangreicher Zahl vorhanden. Es ist aber weitaus schwieriger, das theoretisch erlernte Wissen praktisch anzuwenden. Dazu gibt es unterschiedliche Methoden wie den Einsatz von Planspielen, Rollenspielen, Systemlandkarten oder systemischen Strukturaufstellungen. Bei den IPMA Zertifizierungsprüfungen der Level B und A¹⁶ ist ein Bestandteil der Prüfung ein Rollenspiel mit unterschiedlichen PM-Rollen. Die ZertifizierungskandidatInnen

14 Vgl. Pircher / Schuster (2013: 38 ff.) und Kreindl / Pircher / Schuster (2011: 38 ff.)

15 Vgl. Pircher / Schuster (2013a: 105 ff.)

16 Detaillierte Informationen zu den Zertifizierungslevel der IPMA bzw. den IPMA Zertifizierungsprüfungen der pma siehe <https://www.p-m-a.at/pma-zertifizierung.html>

werden dabei von AssessorInnen beurteilt und u.a. in Hinblick auf ihr Agieren im sozialen System und ihre Sozialkompetenzen bewertet. Bei der Implementierung dieser Methode und beim Training der AssessorInnen für die Durchführung wurde die pma vom Organisationsentwickler und Gruppendynamiker Ewald Krainz beraten. Krainz (2009) setzte sich mit der Frage auseinander, wie eine Bewertungsmethode gestaltet sein muss, um bei Zertifizierungsprüfungen auch die Sozialkompetenzen überprüfbar zu machen. Die ursprüngliche Form der Zertifizierungsprüfungen, bestehend aus einem Wissenstest und einem Interview, war hierfür alleine nicht ausreichend und sollte um einen „action part“ (ebd.: 77) ergänzt werden: In einem Rollenspiel nehmen die ZertifizierungskandidatInnen die Rolle des Projektmanagers/der Projektmanagerin ein, wobei die AssessorInnen das Verhalten in der Rolle im Zusammenhang mit dem geforderten Wissen und Können der Sozialkompetenzen nach der ICB beobachten und überprüfen. Die Ergebnisse werden dann als Feedback an die KandidatInnen zurück gespiegelt. Die Grundannahme dabei ist folgende: Wenn man Erkenntnisse über das Verhalten der ZertifizierungskandidatInnen gewinnen möchte, muss man sie zunächst agieren lassen und ihnen die Möglichkeit geben, ihr Verhalten in bestimmten Situationen zu zeigen – z.B. in der Rolle ProjektmanagerIn. Die AssessorInnen machen ihre Beobachtungen dazu und halten diese schriftlich fest. Im Anschluss werden die Erkenntnisse mit den KandidatInnen diskutiert und reflektiert. Abgeleitet davon wurde ein Standarddesign entwickelt, das von geschulten AssessorInnen immer noch bei bestimmten Zertifizierungsprüfungen nach IPMA von der pma eingesetzt wird (vgl. ebd.: 77 f.).

Um die Ausführungen auf den Punkt zu bringen: Auch die psychodynamische Organisationsbeobachtung – so wie die oben beschriebene Bewertung der Sozialkompetenzen anhand von Rollenspielen – ist eine mögliche Methode, die den StudentInnen dabei helfen kann, zu erkennen, was es überhaupt heißt, in sozialen Systemen zu agieren und Sozialkompetenzen anzuwenden, aber auch diese zu bewerten und zu reflektieren. Zusätzlich unterstützt das Kennenlernen der Methode dabei, zu erkennen, wie komplex Organisationen und die darin enthaltenen sozialen Systeme sind.

Lohmer (2004: 21) spricht in diesem Zusammenhang auch von der „Psychodynamik von Organisationen“, die sich mit der inneren Dynamik von einzelnen Teams bzw. Gruppen beschäftigt, aber auch mit Subsystemen innerhalb einer Organisation, der Organisation in ihrer Gesamtheit und dem Zusammenspiel verschiedener Organisationen. Mit der Methode der psychodynamischen Organisationsbeobachtung wird es möglich, das „Innenleben“ (ebd.: 21) einer Organisation, ihrer Subsysteme und sozialen Systeme wie Teams und Gruppen zu betrachten. Zum Vorschein können unbewältigte Themen, wie z.B. geheime Regeln oder historische Ereignisse, kommen, die auf einer unbewussten Ebene Einfluss auf das alltägliche Handeln haben. Deshalb ist es nicht ausreichend, sich bei einer Organisationsanalyse alleine auf bewusste Prozesse wie Geschäftsabläufe, Aufgaben und Rollen zu konzentrieren, sondern es ist sinnvoll, auch auf irrationale Prozesse zu achten, die einen erweiterten Blick auf das Unbewusste der Organisation möglich machen (vgl. ebd.: 21).

Auch nach Hinshelwood und Skogstad (2011) wird die Methode der psychodynamischen Organisationsbeobachtung eingesetzt, um zu erforschen, wie eine Organisation auf der Ebene des

Unbewussten funktioniert. Außerdem gewährt der Einsatz der Methode Einblick in die Unternehmenskultur und zeigt die „human dimension“ (ebd.: 18) auf, die z.B. die Ängste und Belastungen der MitarbeiterInnen beinhalten kann. Durch die Reflexion der Beobachtungsergebnisse mit den Beobachteten soll deren Sicht auf die eigene Rolle im Unternehmen sensibilisiert werden, aber auch die Fähigkeit zur Selbstreflexion gestärkt werden (vgl. Schuster 2011: 23-24). Für die Rolle des Beobachters/der Beobachterin ist wichtig, dass er/sie im Idealfall nicht Teil der beobachteten Organisation ist, um der Beobachtung nicht die notwendige Objektivität zu nehmen. Die Beobachtung soll aufmerksam – eben mit Fokus auf die Beobachtung an sich – durchgeführt und schriftlich festgehalten werden. Notiert wird, was beobachtet wird, ohne vorschnelle Interpretationen der Situation einfließen zu lassen. Auch persönliche Erfahrungen des Beobachters/der Beobachterin können Einfluss auf seine/ihre Beobachtung haben. Deshalb erfolgt eine Analyse der Beobachtung i.d.R. nicht nur durch den/die BeobachterIn, sondern durch eine sog. Resonanzgruppe. Die Ergebnisse aus der Resonanzgruppe kommen wiederum als Feedback zurück in die beobachtete Organisation (vgl. Hinshelwood/Skogstad 2011: 17 ff.).

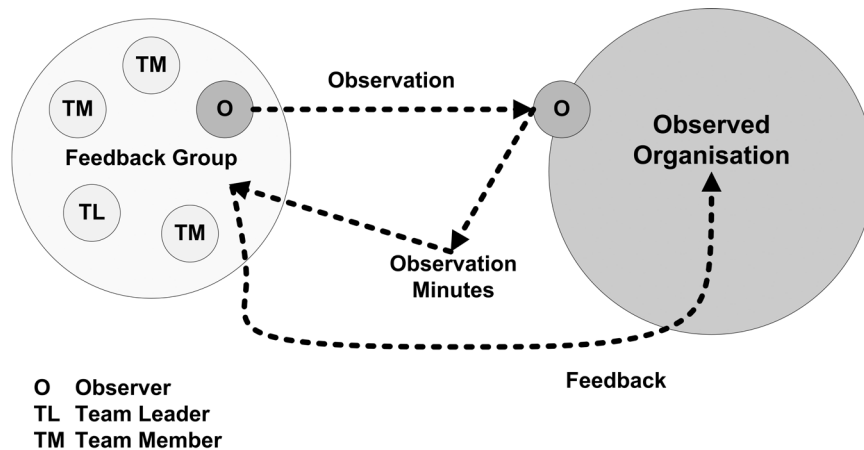
Für ein Beispiel der Arbeitsweise einer Resonanzgruppe in der Praxis sei hier auf Schuster (2016a) verwiesen, der in seiner Fallstudie zur Optimierung des Arbeitsprozesses einer Arbeitsgruppe die Funktion einer Resonanzgruppe erläutert und konkrete Beispiele gibt, wie Ergebnisse aus der Resonanzgruppe in die beobachtete Arbeitsgruppe rückgekoppelt werden (vgl. ebd.: 181 ff.).

Um die Methode der psychodynamischen Organisationsbeobachtung in die Lehre zu implementieren, orientierte sich die Autorin in ihrer Rolle als Lehrveranstaltungsleiterin an Paul-Horn (2006), die einen Erfahrungsbericht (vgl. ebd.: 95 ff.) für ein Seminar mit dem Titel „Unbewusstes in Organisationen – Einführung in die psychoanalytische Organisationsberatung“ verfasst hat. Der Basisprozess der Beobachtung (siehe dazu auch Abbildung 10), den Paul-Horn in ihrem Erfahrungsbericht beschreibt, ist ähnlich jenem, der oben dargelegt wurde¹⁷, und läuft wie folgt ab (vgl. Paul-Horn 2006: 98 ff.):

1. Erstkontakt mit dem Unternehmen, Überschreiten der Systemgrenze des Unternehmens, Erläuterung der Methode der Beobachtung, Klärung des Rollenverständnisses zur Rolle des Beobachters/der Beobachterin
2. Beobachtung der Organisation durch den/die BeobachterIn
3. Der/Die BeobachterIn erstellt ein Protokoll der Beobachtung, das auch komplett anonymisiert wird, falls dies erforderlich ist
4. Analyse des erstellten Protokolls in einer Feedback Gruppe (auch: Resonanzgruppe)
5. Die beobachtete Organisation erhält Feedback, das auf den Ergebnissen der Analyse der Feedback Gruppe (Resonanzgruppe) basiert.

¹⁷ Vgl. Lohmer (2004: 21) und Hinshelwood und Skogstad (2011: 17 ff.).

Abbildung 10: Schematische Darstellung des Basisprozesses der Organisationsbeobachtung



Quelle: vgl. Traar 2006, in: Paul-Horn 2006: 104

Laut Paul-Horn (2006) beginnt die Organisationsbeobachtung bereits mit der ersten Kontaktaufnahme mit dem zu beobachtenden Unternehmen, da ab diesem Zeitpunkt ein wechselseitiger sozialer Prozess zwischen dem/der BeobachterIn und dem Unternehmen einsetzt (vgl. ebd.: 98). Aus der Sichtweise anderer BeobachterInnen heraus beginnt die Beobachtung beispielsweise mit der Anreise zum zu beobachtenden Unternehmen und der Vorbereitung auf die Beobachtung (vgl. Goldmann 2006: 89). Paul-Horn (2006) schildert ihre erste Erfahrung als Beobachterin wie folgt: „In der Rolle der Beobachterin fühlte ich mich anfangs verunsichert durch die geforderte Passivität des scheinbaren Nichtstuns“ (ebd.: 99). Daher streicht sie auch explizit die Wichtigkeit der Vermittlung und Herausbildung eines klaren Rollenverständnisses des Beobachters/der Beobachterin hervor, sowohl für den/die BeobachterIn selbst, als auch für die zu beobachtende Organisation. Die Tätigkeit der Beobachtung an sich erscheint zwar eine eher passive Tätigkeit zu sein, jedoch folgen, wie auch in Abbildung 10 dargestellt, weitere Prozessschritte, innerhalb derer mit den Erkenntnissen aus der Beobachtung aktiv gearbeitet wird (vgl. ebd.: 99 ff.).

Paul-Horn (2006) weist zusätzlich darauf hin, dass bereits erste Eindrücke bei der Kontaktaufnahme mit dem zu beobachtenden Unternehmen aussagekräftige Hinweise über das Unternehmen selbst liefern können. Ein Beispiel hierfür ist die Art, wie mit dem/der BeobachterIn kommuniziert wird, oder wie einfach bzw. schwierig es ist, ein Gespräch mit jener Person zu bekommen, die aufgrund ihrer Rolle innerhalb der Hierarchie in der Lage ist, die Beobachtung zu genehmigen. Erfahrungen und Eindrücke, die Paul-Horn (2006) bei der Kontaktaufnahme mit dem zu beobachtenden Unternehmen als wenig bedeutend interpretiert hatte, erwiesen sich im Zuge der Analyse des Beobachtungsmaterials in der Resonanzgruppe als wesentliche erste Eindrücke. Diese mittels Resonanzgruppe interpretierten Eindrücke wurden in das Unternehmen rückgemeldet und dort als zutreffend bestätigt (vgl. ebd.: 98 ff.).

In der Rolle der Lehrveranstaltungsleiterin entwickelte die Autorin für eigene Lehrveranstaltungen nun auf Basis der oben beschriebenen Ausführungen ein Setting, das auch bei Studierendengruppen, in denen die StudentInnen keine Vorkenntnisse im Bereich der Psychodynamik von Organisationen bzw. der psychodynamischen Organisationsbeobachtung haben, gut einsetzbar

ist. Ziel war es, den StudentInnen eine Idee zu vermitteln, wie die Methode angewandt wird bzw. wie der Einsatz der Methode die StudentInnen bei ihrer eigenen Selbstreflexion unterstützen kann. Insbesondere war das Ziel auch eine Vereinfachung, um nicht direkt in ein Unternehmen zu gehen und den gesamten oben beschriebenen Prozess durchlaufen zu müssen.

Die Autorin reservierte in einer Lehrveranstaltung zum Thema „Leadership and Motivation“ im Sommersemester 2015 in einem Masterstudiengang der FH des BFI Wien zwei Abende zu je vier Lehreinheiten für das Kennenlernen der Methode der psychodynamischen Organisationsbeobachtung. Am ersten Abend wurde die Methode ca. eineinhalb Lehreinheiten lang theoretisch erklärt, und es wurde mit den StudentInnen darüber diskutiert, wobei auch auf den möglichen Nutzen für Führungskräfte eingegangen wurde.

Bei der Wahl des Settings für die Arbeit mit der Methode der psychodynamischen Organisationsbeobachtung orientierte sich die Autorin an den Empfehlungen von Schuster, die er im ersten Teil des vorliegenden Papers erläutert. Schuster empfiehlt ab einer Größe des Plenums von mehr als 12 Personen eine Aufteilung in Kleingruppen von vier bis sieben Personen. Später werden die Ergebnisse aus den Kleingruppen im Plenum zusammengeführt. Mit diesem Setting wurde beispielsweise bei den PM Symposien 2016 und 2017 gearbeitet.

Da die Lehrveranstaltungsgruppe der Autorin aus 26 TeilnehmerInnen bestand, bildeten die StudentInnen Gruppen zu je fünf bzw. sechs Personen. Die Gruppen bekamen den Auftrag, sich außerhalb der FH einen Platz zu suchen, wo viele Menschen verkehren, beispielsweise in einem gut besuchten Lokal, und dort 30 Minuten lang zu beobachten, was passiert, und alles, was ihnen bei der Beobachtung in den Sinn kommt, schriftlich festzuhalten. Bis zum nächsten Lehrveranstaltungstermin war eine Reinschrift des Beobachtungsprotokolls zu erstellen, um damit in der Lehrveranstaltung weiter arbeiten zu können. Wesentlich war, dass alle Personen, die einer Gruppe zugehörig waren, dieselbe Situation beobachteten, damit die Beobachtungsprotokolle der jeweiligen Gruppen später auf Gemeinsamkeiten und Unterschiede analysiert werden konnten. Die Autorin selbst schloss sich ebenfalls einer StudentInnengruppe an, um den StudentInnen beim zweiten Lehrveranstaltungstermin, bei dem die Analyse der Protokolle im Fokus stand, zeigen zu können, wie Protokolle einer Beobachterin mit Erfahrung im Bereich der psychodynamischen Organisationsbeobachtung aussehen können.

Zu Beginn des nächsten Lehrveranstaltungstermins wurden zunächst die Erfahrungen der StudentInnen mit den Beobachtungen im Plenum diskutiert. Wie auch oben nachzulesen ist (vgl. Paul-Horn 2006: 95 ff.), waren die StudentInnen unsicher in ihrer Rolle als BeobachterInnen. In der Diskussion vor der Analyse der Beobachtungsprotokolle äußerten sogar mehrere StudentInnen ihre Angst, bei der Erstellung der Protokolle etwas falsch gemacht zu haben. An dieser Stelle sei gleich angemerkt, dass alle StudentInnen sehr gute und für die Analyse brauchbare Protokolle erstellt hatten. Bei der Analyse der Protokolle wurde gruppenweise vorgegangen. Jede Gruppe verlas zunächst ihre Beobachtungsprotokolle im Plenum, danach wurde gemeinsam analysiert. Was in der Analyse sehr deutlich zum Vorschein kam, waren einerseits die unterschiedlichen Sichtweisen der einzelnen StudentInnen auf ein und dieselbe Situation, andererseits gab es

innerhalb jeder Gruppe einzelne markante Geschehnisse im Zuge der Beobachtung, die in jedem Protokoll der jeweiligen Gruppemitglieder zu finden waren.

Auch die Autorin in ihrer Rolle als Lehrveranstaltungsleiterin verlas ihr Protokoll gemeinsam mit ihrer Beobachtungsgruppe. Bei der Erstellung der Reinschrift des eigenen Protokolls hatte die Autorin jedoch bewusst eine markante Beobachtung weggelassen und folglich natürlich auch nicht vorgelesen, die in der handschriftlichen Version des Beobachtungsprotokolls aber sehr wohl festgehalten war. Zusätzlich bekamen alle StudentInnen eine Kopie der Reinschrift des Protokolls, um bei der Verlesung mitlesen zu können. Bei der weggelassenen Stelle handelte es sich konkret um das Auftreten einer sehr auffälligen weiblichen Person, die bei der Beobachtung in einem Lokal den Raum betrat. Diese Szene war auch in allen Beobachtungsprotokollen der StudentInnen, die in dieser Beobachtungsgruppe waren, zu finden. Als nun die Gemeinsamkeiten der Protokolle der Gruppe diskutiert wurden, waren sich alle StudentInnen – auch jene, die der Gruppe nicht angehörten – einig, dass auch das Betreten des Lokals durch die auffällige weibliche Person dazu gehörte. Als die Autorin die StudentInnen darauf hinwies, dass sie dieses Ereignis gar nicht vorgelesen hätte, wollten ihr die StudentInnen nicht glauben und bestanden sogar darauf, dass dieses Ereignis im Protokoll zu finden sei. Daraufhin bat die Autorin die StudentInnen, die Reinschrift ihres Protokolls, das ja als Kopie an alle verteilt worden war, noch einmal durchzulesen. Die StudentInnen taten dies und stellten fest, dass die beschriebene Szene tatsächlich nicht Teil des Protokolls war. Die Autorin erklärte daraufhin den StudentInnen, dass sie diese Szene bewusst weggelassen hatte, in der Hoffnung, dass genau so ein Effekt eintreten würde, und zeigte den StudentInnen auch, dass im handschriftlichen Protokoll die Szene tatsächlich enthalten war.

Wenn solche Phänomene innerhalb einer Gruppe in einer Lehrveranstaltung auftreten, hat dies enorme Lerneffekte für die Gruppe bzw. die einzelnen Gruppenmitglieder. Es ist ein Unterschied, ob die StudentInnen von solchen Phänomenen in der Theorie lesen, oder ob sie diese selbst erleben. Wenn die StudentInnen Publikationen zu diesen Themen lesen, können sie sich oft nicht vorstellen, dass ihnen das tatsächlich auch selbst passieren kann.

Das hier vorgestellte Beispiel zum Einsatz der Methode der psychodynamischen Organisationsbeobachtung in der Lehrpraxis soll zeigen, dass auch eine relativ komplexe und aufwändige Methode so vereinfacht aufbereitet und eingesetzt werden kann, dass StudentInnen ohne entsprechende Vorkenntnisse einen hohen Lernnutzen für die Berufspraxis aus dem Unterricht mitnehmen können. Außerdem ist es die Erfahrung der Autorin, dass der Einsatz der Methode in Lehrveranstaltungen einen wichtigen Beitrag dazu leistet, Sozialkompetenzen erlebbar und damit erlernbar zu machen.

Ergänzend ist noch zu bemerken, dass Lehre grundsätzlich durch Interventionsforschung erweitert werden kann. Beispielsweise zeigt Preßl oben durch die Darlegung und Interpretation der Beobachtungen der Gruppenreflexion beim PM Symposium auf, dass auch der Prozess, wie sich Gruppenmitglieder mit einer Aufgabenstellung auseinandersetzen, wichtige Erkenntnisse zu Gruppendynamiken liefern kann. Davon abgeleitet kann man auch bei Lehrveranstaltungen

teilnehmende Beobachtungen durchführen. Konkret wurde von der Autorin im Sommersemester 2013 eine Lehrveranstaltung an der FH des BFI Wien beobachtet (vgl. Pircher/Schuster 2013a: 105 ff.). Außerdem wurde im Sommersemester 2018 eine Lehrveranstaltung an der Hochschule für Technik und Wirtschaft Berlin unter anderem mittels teilnehmender Beobachtung beforscht (Komarova 2018).

7. Zusammenfassende Bemerkungen

Die geschilderte Bandbreite der möglichen Anwendung von Gruppenreflexion als Reflexions-, Kommunikations-, Forschungs-, Lehr- und Lernraum soll aufzeigen, wie wesentlich die bewusste Steuerung von Kommunikations- bzw. Gruppenprozessen, *unabhängig vom jeweiligen Inhalt der Kommunikation*, ist. Aus dieser Tatsache ergibt sich auch die Praxisrelevanz gruppenspezifischer Interventionen wie jener der *Gruppenreflexion*. Wenn es das Ziel sein soll, menschliche Zusammenarbeit dahingehend zu optimieren, dass diese möglichst bewusst passiert, ist das Wissen darüber, wie menschliche Kommunikationsprozesse verlaufen bzw. was diese beeinflusst, wesentlich. Aus interventionswissenschaftlicher Perspektive wird davon ausgegangen, dass dieses Wissen in expliziter Form zwar wichtig ist, jedoch ein weiterer wesentlicher Aspekt das implizite Wissen, das *Know-how* aller Beteiligten ist. Dies gilt insbesondere im Kontext von Projektmanagement, wo (a) verstärkt Gruppen zum Einsatz kommen, (b) KommunikationspartnerInnen, im Gegensatz zu hierarchischen Organisationen, häufiger wechseln und (c) Gruppenformationen immer wieder aufgelöst und neukonfiguriert werden.

Abschließend und stark vereinfachend kann gesagt werden, dass die *Gruppenreflexion* und deren Anwendung darauf abzielt, das *Know-how* der TeilnehmerInnen bezüglich *Möglichkeiten der eigenen Bewusstwerdung* bzw. *Möglichkeiten des eigenen Beitrags zur Bewusstwerdung einer Gruppe* zu fördern und weiterzuentwickeln. Damit ist die hier vorgestellte *Gruppenreflexion* nicht nur praxisnah, sondern Praxisanwendung, nämlich *Praxis des Projektmanagements*.

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