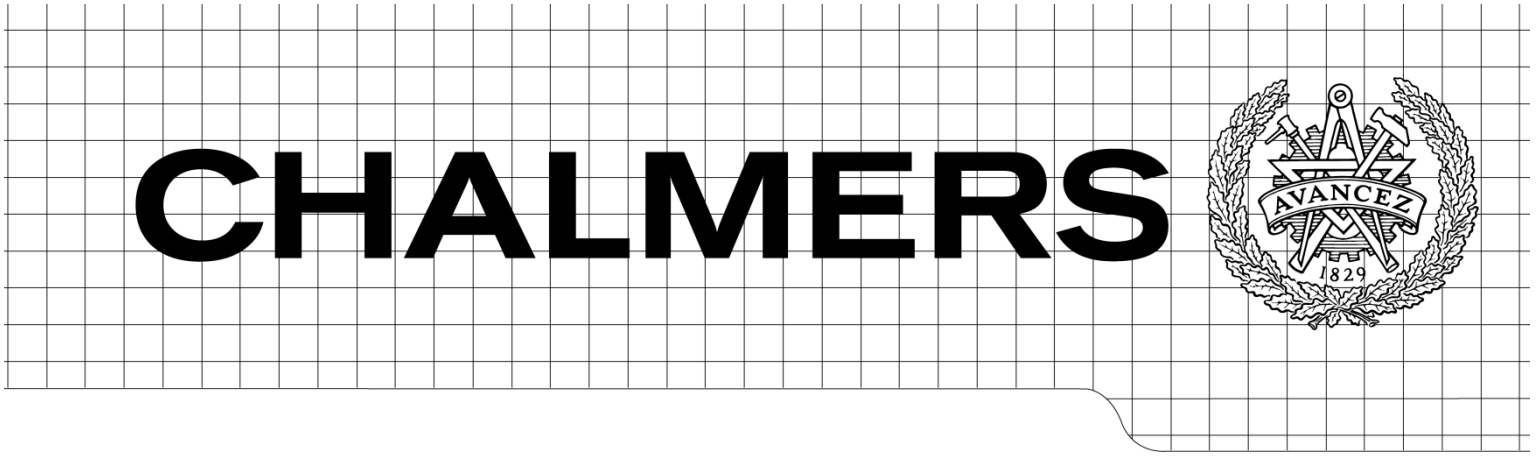

LEARNING HOW TO BREAK RULES:
AN EXPLORATION OF WHY ORGANIZATIONS STILL FUNCTION DESPITE DYSFUNCTIONAL RULES

Master of Science Thesis in Software Engineering

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Learning how to break rules: An exploration of why organizations still function despite dysfunctional rules

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Abstract

Rule breaking in organizations has traditionally been seen as deconstructive actions by angry or self-interested employees. An emerging research area is seeking to highlight a type of rule breaking behaviour that may benefit organizations. Some authors label this type of rule breaking "pro social rule breaking" and it refers to when employees break rules for such reasons as saving time or money for their company, or preserving customer relations. Instead of antagonizing the rule breaking employee, the pro-social rule breaking research area opens up for new perspectives on employees' motivations for breaking rules. The pro-social rule breaking has contributed to the organizational research area by acknowledging that rule-breaking behaviour occurs frequently in organizations, and that employees who break rules are motivated by things other than self-interest.

Organizational rules are created by some part of the organization that perceives itself as having a better grasp of schedules and constraints than the employees who receive the rules. Dismissing rule breaking behaviour as isolated actions motivated by self-interest leads rule-makers to have an incomplete understanding of how their rules are interpreted at the receiving end. This is of current importance to the IT industry where many companies are in the process of transitioning from waterfall to agile methodologies.

This thesis is aimed at contributing to the emerging cause of acknowledging rule-breaking actions as potentially constructive. The report accounts for a multiple case study with the purpose of investigating how newcomers to organizations learn how to break rules. The research purpose made it possible for us to discuss rules, rule-interpretations and communication of rules and rule-breaking with new employees who had recently been included in the organization's social constructs.

The study finds that employees most often learn how to break rules through socialization, and mostly through observing other employees deviating from rules. Rules are in many cases broken because they are found to be inadequate or even misleading in a certain situations. Employees are reluctant to changing a rule even if it is frequently broken; they find that rules are guiding even if broken.

The study also concludes that rule breaking is rarely spoken of in organizations. A rule-maker cannot teach rule breaking without changing the rule receiver's interpretation of the rule. The interpretation of the rule controls behaviour in relation to the rule. This phenomena is attributed to a social mechanism which we label "the interpretation system". The interpretation system is a part of the norms within a group that tell members how to interpret rules.

By approaching rule breaking as objective researchers we were able to uncover how employees interpret rules; information which is normally obscured to the rule-designers within an organization. This is perhaps the most valuable contribution of this thesis.

Contents

Chapter 1

Introduction

Rule breaking has traditionally been seen as deconstructive actions by self-interested or angry employees (Morrison 2006). However, there is an emerging research area that seeks to highlight the type of rule breaking behaviour that benefits organizations, by Morrison (2006) labelled *pro-social rule breaking* (Desai 2010). The concept is illustrated in the following scenario:

> *A Software developer is working in a team that uses an agile development methodology. A sprint is currently in progress and the developer is working on implementing a feature. According to the team's agile methodology, the developers are not supposed to accept change requests from the customer when the sprint is in progress. Normally, the developer would not receive any change requests during the sprint and would be able to focus completely on development, which is a good thing. This time however, the developer accidentally overhears that the customer is going to change the feature he is currently working on. Knowing that his current work is going to be unnecessary, the developer decides to disregard the rule about not taking in change requests, and implement the changes the customer wants. Thereby the developer saves the project's time and money and preserves their customer relations.*

As companies grow into large organizations they adopt rules and become mechanistic (Mintzberg 1980). The prevailing idea in research is that large organizations need rules to be steerable, and the traditional conception of rules is that they are triumphs of bargaining, symbols of order and artefacts of collective life (March, Schulz and Zhou 2000). Within research on creativity and innovation management however, the inherent problems of the mechanistic organizational structure are well established (Baucus et al.

2008). Bureaucracies are known to hamper creative problem solving and responsiveness to market forces, while innovation is hindered by overly rigid or unnecessary rules.

Rules are created by some part of the organization which perceive themselves as having greater experience, superior judgement and a better grasp of schedules and constraints than their subordinates (Baucus et al. 2008). However, rules are also generic and will elicit poor or even flawed outcomes in some situations (Baucus et al. 2008). At the receiving end of rules, employees are torn between rule following and creative problem-solving; two opposing interests put on them by their employer. Do employers expect the sought-after creative problem-solvers to abide blindly to rules? Naturally, we may expect them to be rule breakers, and there is also substantial evidence to show that they are (DeHart-Davis 2007).

When employees choose to break rules they are faced with making decisions on their own, unprotected by the decision-making hierarchy of the organization, yet evidence shows that organizational members on all levels break rules (DeHart-Davis 2007). Since rule breaking evidently occurs without organizations collapsing, we may expect that an organizational member understand what rules to break, under what circumstances to break them and how far to go in breaking rules (Baucus et al. 2008). Academia's failure to recognize that rule breaking is occurring in organizations means researchers and practitioners have a poor understanding of how organizational members go about in answering these questions; essentially; how people learn to break rules.

Understanding rule-breaking behaviour would be of particular importance during organizational change. Such a major change is currently in progress within many companies in the IT Industry. The agile approach to software development has taken the IT industry by storm since the beginning of the millenia (Cockburn 2006) and many large companies are likely to be right in the midst of transitioning from waterfall to agile practices.

A central concept to agile methodologies is the self-organizing team (Cockburn 2006), in which to follow plans, processes and tools is considered secondary to responding to change, and documentation is considered secondary to producing working software (Manifesto for Agile Software Development 2001). Less documentation and more autonomy would likely mean a rule maker is less able to supervise and receive feedback from an agile team. The probable consequence is that deconstructive practices developed within the self-organizing team will remain uncorrected and without feedback, and that good practices will not be transferred to other teams. In essence, it seems fair to assume that introducing agile practices means rule-makers will know less about how the rule receivers are actually working.

For the rule receivers, agile practices are likely to mean more freedom to take decision, while for rule-makers it might entail obstructed insight into actual ways of working, thus; when agile practices are being introduced, it ought to be important for the rule-makers of an organisation to understand how the agile team is going to interpret the new rules and practices.

Doubtless, most organizations struggle to provide a balance of clear boundaries coupled with freedom that enables employees to exercise independent thought (Baucus et al. 2008). Yet empowering rule receivers means distancing them from rule-makers who have greater experience and a better grasp of high-level constraints and strategy. This study aims to benefit practitioners as well as research by investigating how organizational members act in relation to formal rules put upon them by management. This ought to be of interest to all organizations, but in particular to the IT organizations in the process of adopting agile development practices.

1.1 Purpose

The purpose of this study is to investigate how members of IT organizations first learn to break rules, and how they know when, how and to what extent rules may be broken or are expected to be broken.

1.2 Research Questions

In order to investigate how members of IT organizations first learn to break rules, the following research questions have been formulated:

1. How do employees become aware of rule breaking at the workplace?
2. Why do employees participate in rule breaking at the workplace?
3. How do employees break rules at the workplace?
4. Why would a rule remain even though it is frequently broken?

1.3 Delimitations

This is a qualitative study, which means it will investigate the “how” and “why” of rule breaking and not to what extent it occurs in organizations or amongst newcomers.

It is a study of "the receiving end of rules", it will not investigate the mechanisms of rule creation, the purpose of existing rules or rules as translations of company goals. The study is limited to IT companies, even if the results may be generalizable to other domains. The data is collected from workplaces in Sweden, and all participants except one are Swedish. The researchers have not looked into how the culture at Swedish workplaces differs from the culture in other countries. We may however assume that there is a difference. Therefore, the reader may only expect the result to be generalizable to large organizations in Sweden.

Because the study relies exclusively on interviews we are unable to draw conclusions about the actual behaviour of the case subjects. For example, Feldman (1984) states that there may be a difference in what members of a group says are the norm, and how they actually behave; the group like to present a more favourable face than is the reality.

The study is concerned with how employees learn to break formal rules. Formal rules are defined as rules that are explicit and typically created by some rule-making part of the organization (see section 2.1). Breaking of norms, the rules of the informal organization, is usually referred to as deviance (Spreitzer and Sonenshein 2004). While deviance also involves studying norms the study is not concerned about investigating the mechanisms of deviance.

1.4 Disposition of the Report

This first chapter introduces the research subject and establishes the purpose of the study. In the second chapter the literature review presents the secondary data collected and provides a brief review of rules in organizational literature, a deeper review of rule breaking and an introduction to workplace learning. Chapter three describes the research theory that the study relies on, along with a detailed description of how the study was conducted. Chapter four presents results; the primary data collected from each case followed by an individual analysis of each case including a list of the key points of interest. Chapter five brings the individual analyses together in a final discussion pertaining to answering the research questions. Finally, the conclusions of the study are presented in chapter six.

Chapter 2

Literature Review

In this section the reader is provided with the main perspectives on rules within different branches of organizational research and then presented with a deeper review of the emerging research field on rule breaking in organizations. We chose to analyze how rules were handled in general, not only in IT organizations; partly due to that there is very little literature about rule breaking in IT organizations. The literature review section is concluded with a brief introduction to the huge research field on organizational learning.

2.1 Rules

In order to ease into the topic of organizational rule breaking, this section aim to review some of the perceptions and definitions of rules that appear in organizational literature. It turns out that researchers have widely different perspectives on rules, to a large extent depending on what organization structure they are promoting. While this thesis intends to avoid high-level discussions about organizations, it seems inevitable to have a fundamental understanding about the mechanistic and organic organization structure in order to see from where the different perspectives of rules originate. We will start the section with a border-crossing definition of rules however, and will then touch upon rules in the context of organizational learning. The section is concluded by a review of norms; the rules of the informal organization.

2.1.1 Rules: definition

Rules in organizations are defined as actions, policies, regulations or prohibitions, which are in some sense collectively shared, and pertain to how members of the firm are supposed to execute their jobs (March, Schulz and Zhou 2000, Desai 2010). Rules are directed towards improving organizational performance and most organizations develop rules, procedures, and processes to provide consistency and control over decisions and behaviour (March, Schulz and Zhou 2000, Baucus et al. 2008). Rules substitute managerial supervision while still allowing decisions to be made by managers on an upper level (March, Schulz and Zhou 2000, Baucus et al. 2008), but rules are not just for the benefit of management; they enable members of the organization to set expectations, and may also serve to protect the people who are subject to them (Desai 2010, Olin and Wickenberg 2001). Finally, rules serve a purpose of socializing new members into organizational activities (Desai 2010).

Rules are consciously created by some part of the organization that perceive themselves as having greater experience, superior judgement and a better grasp of schedules and resource constraints than their subordinates (Baucus et al. 2008). Some literature states that rules are created by managers (Baucus et al. 2008), while other (Mintzberg 1980, Galbraith 1979) talk about a rulemaking part of the organization called the technostructure, which contain people with specialized knowledge and experience. Brunsson (1989) points out that organizations have separate parts that care about rules and that care about actions, and that elements of the former demand proper rules while elements of the latter demand proper actions.

While rules substitute control through managerial supervision, they are relatively crude informational devices, since they are specific to a certain problem (Ouchi 1980). A decision maker must know which rule to apply in a given situation. According to Ouchi (1980), when a situation is encountered that rules fail to account for, the problem is referred upwards so that policymakers can invent new rules.

Many rules in an organization are not recorded in written form, and many of those that are written are hardly connected to the actual behaviour of the organization (March, Schulz and Zhou 2000). Written rules require documentation and need to be updated to fit the organizational needs over time. Written rules may also be interpreted in different ways (March, Schulz and Zhou 2000). DeHart-Davis (2007) conclude in her study that written rules are obeyed to a greater extent than unwritten rules, because of the perceived objectivity of the written word.

2.1.2 Mechanistic and organic

Rules are traditionally closely associated with bureaucracies (March, Schulz and Zhou 2000) and mechanistic organizations (Baucus et al. 2008). The mechanistic organization is a stereotype, which describes the most formal type of company structure. These organizations rely on a strict chain of command in which managers at upper levels make key decisions and communicate them through rules (Baucus et al. 2008). The oldest conception of rules, and one that is prevailing in the mechanistic view of the organization is the one that rules are triumphs of bargaining, symbols of order and artefacts of collective life (March, Schulz and Zhou 2000). Dahlbom and Mathiassen (1993) argues that the software engineering industry is characterized by a mechanistic approach.

The least formal type of organization structure is the organic organization (Baucus et al. 2008). Organic organizations rely on control through corporate culture; shared norms and belief rather than formal rules and regulations (Baucus et al. 2008). Employees often communicate through informal channels (Baucus et al. 2008). Empowering individual employees to make decisions is an idea that belongs to the organic organization (Baucus et al. 2008). Organizations actually operate somewhere in-between the mechanistic and organic structure, and they are generally described as moving towards the mechanistic structure as they grow larger (Baucus et al. 2008).

2.1.3 Rules and organizational change

March, Schulz and Zhou (2000) are interested in rules as dynamic entities, which change along with the organization and its environment. According to the authors, rules are social creations which evolve through incremental adjustments based on experiences using them; rules that are good will expand in use, while rules that have a negative impact on the organization will be used less and less until they eventually disappear (March, Schulz and Zhou 2000). If a rule persists even though it is bad for the organization, it may be because there is a group within the organization that enforces it to protect their own interests.

Desai (2010) is also interested in rules as connected to organizational learning and change. According to him, organizations will have difficulty surviving if they do not adapt the rules to their changing environment, however organizations can also adapt too quickly to their environment; causing poor performance as a result of employees never being able to develop experience with the routines (Desai 2010). Because of this, organizations tend to drift from alignment with their environment from time to time before rules and procedures are updated (Desai 2010).

2.1.4 Norms

The terms formal and informal are crosscutting within organizational literature; the organization is generally described as consisting of formal and informal systems. There is formal and informal learning, and rules can be formal or informal. Informal rules are described as the rules of the informal organization (Granér 1994); the informal organization being the social structure and its rules within an organization. Most authors use the terms "norm" and "informal rule" interchangeably, while some treat norms as a certain kind of informal rule (Feldman 1984). Ouchi (1980) on the other hand, uses the term "traditions" to refer to the implicit rules that govern group members' behaviour.

Norms are informal rules that groups adopt to regulate group members' behaviour (Feldman 1984). Norms exist in the sense that group members usually act in a certain way and are often punished when seen not acting in this way (Axelrod 1986). The existence of a norm is a matter of degree rather than all or nothing, which means that norms grow and decay (Axelrod 1986). The extent to which an action is a norm depends on just how often the action is repeated and how often it is punished (Axelrod 1986). Feldman (1984) provides a thorough analysis of norm creation, but simply put: norms emerge as patterns of activity in organizations are repeated and consensus develops about the appropriateness of particular behaviours (Desai 2010). Norms can also originate from a few powerful individuals who want to promote a certain type of behaviour (Axelrod 1986).

The set of norms in a formal organization may produce a unified point of view about how the organization is supposed to work (Ouchi 1980). From this point of view, group members can deduce rules to guide any given situation, thus norms may provide a complete form of control when rules fail to do so (Ouchi 1980). In addition to being work-related, the norm system also accounts for strictly social occurrences, and instructs group members not only how to act but how to think and to feel (Granér 1994).

Established norms can exert tremendous and consistent power over behaviour (Axelrod 1986, Feldman 1984). They are an expression of our deeply rooted need for belonging and serve to stabilize the group by increasing the predictability of the members' behaviour (Feldman 1984). Groups also enforce norms that prevent interpersonal discomfort (Feldman 1984). Deviance from a norm is generally perceived as a threat to the group's stability and strength (Granér 1994). Norms are upheld by a number of mechanisms (Axelrod 1986). First, there are social punishments; deviance from norms may be sanctioned with awkward silence, remarks, gossip or even open confrontation or exclusion of the deviant (Granér 1994). Metanorms are mechanisms that in turn may uphold the sanctions; metanorms punish group members who fail to punish deviants,

linking vengefulness toward the deviant to vengefulness towards non-enforcers (Axelrod 1986). Norms may also become self-enforced through internalization; if a norm is internalized it is psychologically painful to break it even if the breach is not sanctioned (Axelrod 1986). Internalization only occurs if the individual identifies with the group (Axelrod 1986).

Group norms give members a chance to express what is central to the group's identity (Feldman 1984). What members of the group say is a norm may be different from the actual behaviour; the group is aware only of some of the norms, and even fewer are ever discussed (Granér 1994). The group may also want to present a face to outsiders that are more favourable than reality (Feldman 1984). Groups tend to deny widespread deviance by normalizing it, because it reminds the members of the group's weakness (Feldman 1984).

For newcomers to a group, social proof play an important role in communicating and enforcing norms (Axelrod 1986). Social proof is a term from social psychology, and is the idea that we pick up clues from others about what behaviours are proper for us in a given situation (Axelrod 1986). As newcomers our environment provide information about how the group has been adapting to its environment (Axelrod 1986). By conforming to the behaviour of others we are not only more likely to perform in an appropriate way, we also fill our psychological need to be part of the group (Axelrod 1986).

Norms may either enhance or impair the group's performance (Feldman 1984). If the group feel that management are supportive, norms tend to be facilitating, while if the group antagonizes the management, the group is likely to develop inhibiting norms (Feldman 1984). Of particular interest is that norms tell people how to interpret and relate to rules (Granér 1994).

The terms formal and informal, although common, are debated. The line between unwritten formal rules and informal rules is blurred (Morrison 2006), and similarly to how Eraut (2000) argues against the term informal learning, it may be the case that informal rules is treated as a residual category to describe any kind of rules that are not formally communicated.

2.1.5 Summary

Rules are contradictory; while they are designed for the greater good of the organization (March Schulz and Zhou 2000) they are claimed by some authors to constrain creativity, limit conscious decision-making and cause ethical tension when employees are forced to break them (Baucus et al. 2008). Rules are favoured from a collective perspective,

but disliked on an individual level and they both protect from and exclude people from decision-making.

Rules are traditionally associated with the mechanistic organization structure, which in turn is associated with large organizations (Baucus et al. 2008). On the opposite end of the rigidness-scale are organic organizations (Baucus et al. 2008). Some authors see rules playing an important part in organizational change (March, Schulz and Zhou 2000, Desai 2010). Organizations drift from alignment with their environment from time to time until the rules and practices are updated (Desai 2010).

Many authors distinguish between formal and informal rules. We define formal rules as rules that are formally expressed within the organization. They have typically been put in place by someone with authority ("top-down"). They can be communicated to the newcomer explicitly; either in written form or spoken, but they can also be communicated via socialization, socialization meaning observation, imitation and practice (Nonaka 1994). Note that if a an employee picks up a formal rule through socialization the employee is likely not made aware of whether the rule is formal or informal.

Norms are informal rules that emerge spontaneously within groups and which exert consistent and powerful influence over the group members' actions (Axelrod 1986, Feldman 1984). Norms are enforced through various types of sanctions and through individuals' deeply rooted needs to be part of a group (Axelrod 1986, Granér 1994). Newcomers learn norms partly through social proof; through picking up clues about proper behaviour from their environment (Axelrod 1986). Norms can either enhance or impair a group's performance, and norms tell people how to interpret rules (Granér 1994).

2.2 Rule Breaking

Even though there is substantial evidence that employees on all hierarchical levels break rules (DeHart-Davis 2007), rule breaking is a new and emerging topic within the field of organizational research. The behaviour can be split into actions that are considered selfless and selfish, in organizational research the focus have generally been that rule breaking is a selfish behaviour that is deconstructive for an organization (Morrison 2006). However, in this study we are interested in research that recognizes rule breaking as a potentially constructive behaviour. We have found only a few studies that explore this subject in depth (Dahling et al. 2012, DeHart-Davis 2007, Desai 2010, Kirke 2010, Morrison 2006, Olin and Wickenberg 2001). There are however a lot of research that are adjacent to or touch upon organizational rule breaking within a larger context, namely studies on deviance in organizations (Spreitzer and Sonenshein 2004, Warren 2003),

studies on innovation and creativity management (Baucus et al. 2008), and research on pro-social behaviour. The latter is defined as "positive social acts carried out to produce and maintain the integrity of others" (Morrison 2006), and seems to have emerged as an organizational topic in the '80s, following considerable attention within the field of behavioural and social science (Brief and Motowidlo 1986).

The majority of the studies on constructive organizational rule breaking are exploratory (Kirke 2010, Morrison 2006, Olin and Wickenberg 2001), two produce quantitative results (Dahling et al. 2012, DeHart-Davis 2007), and yet another is a literature review and analysis (Desai 2010). They approach the topic from different perspectives; Morrison (2006:p.7) is exclusively interested in "Pro-social rule breaking", a term she invents based on Brief and Motowidlo's pro-social behaviour (1986), and which she defines as:

> *When an employee intentionally violates a formal organizational policy, regulation or prohibition with the primary intention of promoting the welfare of the organization or its stakeholders.*

Morrison (2006) devotes her study to finding personality and workplace characteristics that increase the likelihood of pro-social rule breaking. DeHart-Davis (2007) picks up on Morrison's interest in rule breaking personalities by studying the "unbureaucratic personality", noting that it has been portrayed only unflattering in the literature of the 60's and 70's, DeHart-Davis (2007) uses the unbureaucratic personality in a positive sense, but avoids the term pro-social rule breaking even though she refers to Morrison. Dahling et al. (2012) on the other hand base their quantitative study on Morrison's pro-social rule breaking, as they develop guidelines for measuring the existence of rule breaking.

The earliest study , Olin and Wickenberg (2001) study the effect of general rules when applied to new product development projects, through interviewing project managers. Kirke's study (2010) is actually an ethnographic study about the British army[1], but its examples are largely relevant for organizations. Desai's study (2010) relates rule breaking to the research field made famous by March, Schulz and Zhou (2000), on how rules adapt, or fail to adapt, to an organization's environment.

2.2.1 Rule breaking: definition

Rule breaking can be defined as (Desai 2010, Morrison 2006):

[1]We see organizations as social creations, and the normative ways that can be found in them is reflected outside them as well. We did not have the possibility to study this further and therefore we do not differentiate on the research done in the area of social science from the organizational one.

> An employee's voluntary and intentional departure of behaviour from rules that are explicit, active and top-down.

From this definition follows that rule breaking would not be considered as such if the employee is unaware of the rule she is breaking. This is a philosophically problematic definition, but a useful one in practice since it allows researchers to study an individual in separation from her organization. The definition of rule breaking is relatively straightforward, and even though the research field is new and emerging, none of the authors debate the term to any length (Dahling et al. 2012, DeHart-Davis 2007, Desai 2010, Kirke 2010, Morrison 2006).

2.2.2 Why break rules?

According to innovation management researchers Baucus et al. (2008), rule breaking in organizations is inevitable. Because it is impossible to anticipate all possible problems and to establish rules and procedures to guide in all situations; employees will face situations for which rules offer little guidance or may even elicit fundamentally flawed responses (Baucus et al. 2008).

Bureaucratic rigidity lead to advice aimed at encouraging employees to break rules and avoid standard operating procedures (Baucus et al. 2008). Rules may be out-dated (Olin and Wickenberg 2001), rules may be bad from the start (DeHart-Davis 2007), and rules may not comply with norms that govern behaviour within a group (Desai 2010).

2.2.3 When norms and rules collide

The research field on organizational deviance is more established compared to organizational rule breaking. Deviance refers to intentional behaviours that depart from group norms, rather than formal rules (Spreitzer and Sonenshein 2004). Spreitzer and Sonenshein (2004) use the term "norm" in its broader sense, which comprises not only social aspects but also informal instructions on how to perform work tasks, similar to Bass' (1990) definition; norms are shared group expectations about behaviour; socially defined and enforced standards about how the world should be interpreted and how one should behave in it.

Deviance and rule breaking are different in the sense that deviance may break something inexplicit; norms are fleeting notions that the group may not be aware of until they are broken, which makes deviance harder to define, and harder to grasp (Spreitzer and Sonenshein 2004). Norms and rules are also controlled differently; rule breaking is

organizationally punished, while deviance is socially controlled (Granér 1994, Morrison 2006).

Social norms and rules are extremes at each end of an "explicitness-scale", but in actuality, they are too closely related to be considered separate. Norms concern how to abide to rules (Verkuyten 1994), norms intersect and collide with rules, norms and rules sometimes reflect different interests (Desai 2010, Brunsson 1989) and sometimes coincide (Desai 2010). Desai (2010) describes a group of fire fighters who know that they are not allowed to enter an empty burning building until backup arrives. However, they do so anyway if the fire is small and manageable. The fire fighters in this example break the rule but adhere to the norm; a behaviour Morrison (2006) would likely label as pro-social rule breaking. The example illustrates the interesting conflict that occurs at the receiving end of rules when the interests of rules and norms collide.

Desai (2010) is very interested in norms as interpreters of rules, while avoiding the term "norms"; Desai (2010) studies "routines" which are described as the actual day-to-day behaviour in organizations. Routines are patterns of repeated behaviour, but naturally contain variations, thus routines can be broken without the act being "breaking" in a sense (Desai 2010). Routines are described as having an ostensive component, which is the abstract behaviour that describes the routine, and a performative component, which refer to the actual behaviour (Desai 2010). The ostensive component serves to guide behaviour and socialize new members into organizational activities (Desai 2010). In an organization, which is drifting from its environment, the performative components of routines depart from formal rules (Desai 2010).

The social aspect of rule breaking in society is explored empirically by Verkuyten (1994); he accounts for a survey that investigates the level of consensus amongst citizens on when it is justified to break rules. The rules that Verkuyten (1994) investigates are citizen rules; stopping the car at a red traffic light and paying taxes. Almost all citizens agree that red traffic lights in principle should be obeyed, however every respondent also gave at least one description of a situation in which running a red traffic light is acceptable (Verkuyten 1994). Verkuyten (1994) discovers a high level of agreement in beliefs and understandings about when a rule should be observed or may be violated, arriving at the conclusion that rule breaking is socially controlled. Spreitzer and Sonenshein (2004) have a similar but at the same time opposing interest, as they suggest future work should study if positive deviance is contagious. Combining the two arguments; can deviance be contagious, so that a pattern of rule breaking develops, which becomes a norm - a rule for breaking rules? Or is deviance, if contagious, only contagious in the sense that group members break formal and informal rules at a whim?

Morrison (2006) draws the conclusion that pro-social rule breaking is contagious; employees glean clues from their co-workers about whether behaviour is likely to be tolerated or punished, thus if a rule has been broken before by someone else, a worker is more likely to break it herself. This is a subject that Spreitzer and Sonenshein (2004) show interest in, and which is theoretically explored by DeHart-Davis (2007) and Desai (2010).

2.2.4 Rules for breaking rules

When breaking rules, employees can no longer rely on authority to make decisions for them. According to Baucus et al. (2008), any employee that breaks rules would face a set of issues including; (a) which rules to break; (b) under what circumstances should rules be broken; (c) how far to go in breaking the rules; and (d) who gets to make or break the rules? The evidence of Verkuyten (1994), along with Axelrod (1986) suggests that employees rely on norms to answer these questions.

The result of Verkuyten's (1994) survey can be categorised into a three main reasons for rules to be broken in society in general, the most common being that rule breaking is justified when a principle involved takes precedence over the principle that the rule should be followed, for example; running a red traffic light is considered okay when there is a life-threatening emergency, and evading taxes is justified if people really need the money to live a decent life.

Secondly, rule breaking is acceptable if circumstances make the rule irrelevant, such as a red traffic light is irrelevant at a country road at night with no one around. Finally, rule breaking may be justified as a "weapon of the weak" (Kirke 2010), as something performed as sabotage towards a more powerful party, for example some people claim that tax evasion is justified because taxes are too high and the government does not handle tax money adequately (Verkuyten 1994). To summarize, in society rule breaking is considered justified when one or several of the following *rules for breaking rules* apply, the first one being the most common:

1. Break rules when a principle takes precedence over the principle that a certain rule should be followed
2. Break rules when circumstances make a rule irrelevant
3. Break rules when the rule breaking is the weapon of the weak against a powerful superior

A fourth type of rule breaking is mentioned by Kirke (2010), who accounts for his experience from thirty years in the British army. This fourth type is specific to organizations

and concern when informal systems, often complex, have developed because the formal system is insufficient.

The reasons for breaking rules mentioned in Verkuyten's (1994) study appear in several other studies on rule breaking in organizations. Olin and Wickenberg (2001) phrase number 2 as "rules are generic; situations are specific". Morrison (2006) presents many examples of number 1, as is reflected in the two runner-ups in her summary of the most commonly mentioned *motivations for breaking rules* at work:

1. The employee is trying to more efficiently perform his or her job duties (most common)
2. The employee is trying to help another employee (almost as common as number 1)
3. The employee is trying to help customers (least common)

Yet another reason for rule breaking, that may itself be added to the list of rules for breaking rules, but which can simultaneously be used to explain any of the other reasons, is the simple one that rule may be bad. Rules may be bad from the start, because they are made by people who are imperfect (DeHart-Davis 2007), and who have personal interests to protect (Olin and Wickenberg 2001). Rules also become out-dated; "they stem from the past and seek to stabilize the present and future" (Olin and Wickenberg 2001). The study of how rules may tell the history of a company as well as how they must evolve incrementally to adapt to the organization's environment, is a research field all in itself which will only be touched upon here.

2.2.5 Rule breaking and organizational change

Desai (2010) in his paper on rule violations and organizational search treats rule breaking as an early indicator of organizational drift; rule breaking develops because that the organization is drifting from alignment with its current environment. By recognizing rule breaking and adjusting routines and practices accordingly, the organization may adapt to its environment again without serious shortfalls (Desai 2010). As such, rule breaking is an important source of information to the management of a company. However, rule breaking is likely to pass unnoticed until the company encounters performance problems (Desai 2010).

If rule breaking performed by employees is disregarded by management at first, it may become frequent and subsequently normalized; in which case it is unlikely to be acknowledged by management at all, and an opportunity to adapt the organization to

its environment will have been lost (Desai 2010). Organizations will have difficulty surviving if they fail to adapt their routines to their changing environment. However, organizational change is a political process, which causes uncertainty for those that are affected and push them out of their comfort zones (Buchanan and Badham 2008). It is met by the self-interests and personal ambitions that collide with the planned changes, and is therefore challenged due to the will of preservation (Buchanan and Badham 2008).

Organizations can also adapt too quickly to their environment, so that employees never are able to develop competence with the routines (Desai 2010). Things that hinder organizational learning are lack of slack resources and a high density of rules, since many rules cause rigid organizations (Desai 2010). DeHart-Davis (2007) concludes that organizations with centralized management and many written rules increase the likelihood of rule breaking.

2.2.6 The rule breaking personality

Morrison (2006) devotes great attention to the personality characteristics of persons that engage in pro-social rule breaking. She finds that pro-social rule breakers are empathic, risk-taking persons, who are non-conforming and proactive; they feel generally unconstrained in bringing about change. Morrison (2006) also notes that employees are more likely to break rules if they care strongly about their job, and if they have a sense of autonomy.

DeHart-Davis (2007) picks up on Morrison's (2006) interest in rule breaking personalities by studying the "unbureaucratic personality", noting that it has been portrayed only unflattering in the literature of the 60's and 70's. DeHart-Davis (2007) quantitatively confirms Morrison's (2006) findings about risk-taking and non-conformist persons being more prone to engage in constructive rule breaking (with a significance level of 0.01). However, DeHart-Davis (2007), in contrary to Morrison's (2006) findings about employees breaking rules to help customers, finds that a person who breaks rules is less likely to be committed to public service, which leads her to question whether rule breaking can be considered constructive.

2.2.7 Breaking rules for the right reasons?

Morrison (2006) and Dahling et al. (2012) treat rule breaking as a sub-category of pro-social behaviour. They argue strongly against the "old" economic view of employees as self-interested employees (Dahling et al. 2012). Olin and Wickenberg (2001) find that successful project managers break rules. DeHart-Davis (2007), on the other hand,

while acknowledging that research has overwhelmingly focused on negative rule breaking in the past, challenges the term pro-social rule breaking with the argument that rule breaking is "individually favoured, but collectively feared".

According to Olin and Wickenberg (2001), whether deviance is viewed in a positive or negative light depends on if the observer is an adherent of subjectivism or an adherent of objectivism. According to adherents of objectivism, there is a common consensus in society how to behave, and deviance is a crime against the consensus (Olin and Wickenberg 2001). Adherents of subjectivism however, claim that deviance is not the quality of an act a person commits, but a consequence of application of rules to an offender (Olin and Wickenberg 2001).

A similar debate as the one about pro-social rule breaking has been going on about the term positive deviance (Spreitzer and Sonenshein 2004). Many authors claim that positive deviance cannot exist, and Spreitzer and Sonenshein (2004) recognize the subjectivity involved in defining a term that is positively charged. They review literature and find four perspectives on deviance, one of which would be transferable to rule breaking; the reactive approach says that the "badness" of a deed is determined by an audience to the behaviour, which implies that deviance, or in our case rule breaking that goes unnoticed, would not be bad by definition (Spreitzer and Sonenshein 2004).

Kirke (2010) claims that the "Ok-ness" of rule breaking is unofficially defined by agents of formal authority; superiors can use the formal apparatus of power and punishment to change the "Ok-ness" at any time. The sense of "Ok-ness" may be different at different levels of authority, but it is bound by organizational culture (Kirke 2010). According to Dahling et al's (2012) study on the other hand, supervisors are rule enforcers and in principle react negatively to rule breaking.

Similar to Kirke's (2010) "Ok-ness" argument is the one that the perception of a rule breaking act differs on different levels in the hierarchy of an organization (DeHart-Davis 2007). For example, at an unemployment agency, the front-line workers may experience an increase in job morale by allowing jobless applicants to forego the mandatory time frames before which they may return to the agency (DeHart-Davis 2007). At a higher level of the company, however, managers may notice that the department gets flooded with applicants; to the front-line workers the rule breaking is positive, but to the managers it is negative (DeHart-Davis 2007).

The research on pro-social rule breaking is interested in conscious decision making (Morrison 2006, Desai 2010), however, as Nobel-prize winner Kahneman (2011) points out, humans are lazy decision makers. When we are confronted with a situation in which we have to make a decision, we quickly generate an interpretation, a coherent story. If

the story is good enough, and the stakes are low enough, we avoid thinking our decision through (Kahneman 2011). It may even be the case that if we are presented with a hard decision, we masquerade it as a simple one to avoid putting effort in (Kahneman 2011). This may be important to take into consideration when studying why people start to break rules.

2.2.8 Summary

This thesis relies on rule breaking being recognized as a potentially constructive force; be it as an indicator that the organization is drifting from its environment, or as a result of imperfect rules attempting to constrain creative problem-solving employees. When rule breaking is recognized as something to favoured rather than feared, we believe it opens up new possibilities of understanding how organizational entities actually operate.

Similar to several of the authors (Spreitzer and Sonenshein 2004, Morrison 2006, DeHart-Davis 2007, Desai 2010), we are interested in if rule breaking is contagious. In society, it is at least subconsciously well-known that widespread acts of rule breaking are controlled by "rules for breaking rules", the most common being "Break rules when a principle takes precedence over the principle that a certain rule should be followed" (Verkuyten 1994). DeHart-Davis (2007) statement that rule breaking is "individually favoured, but collectively feared", indicates that rule breaking has to be managed to an adequate level within organizations as well, and there is substantial evidence to show that rule breaking is socially controlled (Morrison 2006, DeHart-Davis 2007, Desai 2010, Spreitzer and Sonenshein 2004).

Baucus et al. (2008) says that when employees break rules they face a set of issues including under what circumstances to break rules, and how far to go in breaking rules. While Morrison (2006) touch upon the answer to the first of these two questions by concluding that the most common reasons for breaking rules are in order to perform one's job more effectively and in order to help other employees, we still have a very poor understanding of how employees actually go about in making the decision to break rules.

2.3 Workplace Learning

In order to understand why rules are broken, one needs to investigate the mechanisms by which people learn how to break rules. Learning theory is a massive body of research, which we cannot even begin to comprehensively account for here. However, learning

theory is not at all elucidated within the rule breaking body of knowledge, which is why we feel the need to briefly introduce a few established definitions in this section.

Learning is defined in literature as the process by which knowledge is acquired, or as occurring when existing knowledge is used in a new context or in new combinations (Eraut 2000). Knowledge is generally explained as consisting of tacit and explicit components. Explicit knowledge can be communicated to others, while tacit knowledge is deeply rooted in action, and has a personal quality, which makes it hard to formalize and communicate (Nonaka 1994). According to Nonaka (1994), learning is the effect of conversion between tacit and explicit knowledge. Eraut (2000), use Nonaka's terms to define knowledge as consisting of; codified knowledge which is explicit knowledge, and personal knowledge which is skills and procedural and process knowledge that may be either tacit or explicit.

Nonaka (1994), points out that an individual can acquire tacit knowledge through observation, imitation and practice, and that such a process requires that the participants have some form of shared experience. Bandura (1977) defines this as social modelling and it is when learning occurs by observation of behaviour in one's environment; this is described as a process that avoids the errors that can occur due to experiential learning (Manz and Sims 1981). The process of creating tacit knowledge through shared experience is called "socialization" (Nonaka 1994). Knowledge can also be created through sorting, adding and categorizing explicit knowledge, which is referred to as "combination". This can be seen as trial and error process in which individuals learn from the consequences of their direct experience, something Bandura (1977) describes as tedious and hazardous. The conversion of tacit knowledge into explicit is labelled "externalization", while the final learning mode, "internalization" is similar to the traditional notion of learning. Nonaka (1994) discusses how this internalization procedure transforms explicit knowledge into tacit knowledge; thus making it harder to formalize.

The study focuses on how people learn via formal and informal ways in the organization. Formal learning is defined here as the process in which the employee learns the formal rules, processes, policies, etc. in an organization. This can be done by observation, reading, or inquiring knowledge from other persons in the organization. What we consider as formal in the organization are the things that are conveyed via formal channels, transmitted to an individual, a group of individuals, a part of the organization, or the whole organization in a way that is not hidden from members within management or at a higher hierarchy level in the organization.

Organizational socialization is defined in literature as the process through which new employees are transformed into effective members of the organization by acquiring the

norms and knowledge that are needed to participate as an organizational member (Feldman 1984, Morrison 2002). It is argued that the socialization process occurs through social interactions between the newcomer and more experienced members of the organization (Feldman 1984).

Chapter 3

Research Design

This study has been performed as a holistic multiple case study (Yin 2004) which is exploratory and theory building. It investigates a contemporary phenomenon within its real-life context and seeks not to produce statistical evidence but to provide a deeper understanding of how newcomers in IT organizations learn how to break rules. This section presents the research theory that the study design is based on, and then we describe how the study was performed, first however, we motivate why a qualitative case study about social activities contribute to the software engineering research area.

3.1 About the Software Engineering Research Area

Since software engineering is closely related to computer science, and often associated with natural sciences, there is a common conception that research within the area needs to rely on positivistic research designs that produce quantitative results (Seaman 2008). However, while software engineering concerns advanced engineering work it is a multi-disciplinary area, which also encompasses a high degree of human activities. In order to explore how engineers construct and maintain complex software, we need to investigate not just the tools and processes they use, but also the human activities that surround them (Easterbrook et al. 2008). To achieve this we need to draw research methods from disciplines that study human behaviour, on an individual level (psychology), and an organizational level (sociology) (Easterbrook et al. 2008).

3.2 Case Study Research Theory

Case studies allow the researcher to study contemporary phenomenon within its real-life context, for which the boundary between phenomenon and context is unclear (Yin 2004). They can involve single or multiple cases, but multiple case studies are preferred in all but very specific situations (Yin 2004). The cases can be approached as holistic or embedded; a holistic case is studied in its totality while an embedded case is divided into subunits for individual analysis (Yin 2004). Whether one or the other is appropriate depends on whether the cases have relevant subunits.

Case studies benefit from combining several different data sources, such as interviews, observations, surveys and written sources and evidence may be either qualitative or quantitative (Yin 2004, Eisenhardt 1989). Several different data sources enable triangulation of data. Eisenhardt (1989) also suggests that several researchers should work together when conducting case studies; it not only increases the quality of data collection but also boosts the creativity of the data analysis process.

Case studies can be exploratory, explanatory, improving or descriptive (Runeson and Höst 2009). A descriptive case study seeks to portray a situation or phenomenon while explanatory case studies seek to define causal relationships. Improving case studies are similar to action research (Runeson and Höst 2009). The exploratory case study is the most common variant (Runeson and Höst 2009). It seeks to investigate the "how" and "why" of a phenomenon but not the "how many" or "how often"; an exploratory case study explores how rule breaking is happening, seeks new insights and aims at generating hypotheses for further research (Yin 2004, Runeson and Höst 2009). Exploratory studies precede descriptive and explanatory studies within a research area and are appropriate when the research objective is previously unexplored (Runeson and Höst 2009).

A case study is said to be conducted in five major steps (Runeson and Höst 2009):

1. Planning of the study and definition of objectives
2. Preparation of protocols for data collection
3. Collection of evidence
4. Analysis of collected evidence
5. Reporting

These are essentially the same steps as any empirical study, however; while experiments and surveys are generally fixed research in which key variables are decided at the start

of the study, Runeson and Höst (2009) suggests that case studies should be flexibly conducted; researchers should be able to go back and change research questions as long as the purpose of the study is maintained. Several case study researchers agree that case studies benefits from iteration, in particular between the data collection and analysis steps (Eisenhardt 1989, Runeson and Höst 2009, Yin 2004).

3.2.1 Literature review

According to Yin (2004), the literature review has the purpose of aiding in defining sharper and more insightful research questions and thus belongs to the planning step of case study research. Eisenhardt (1989) treats the literature review as a secondary data source as well as a means of broadening the perspectives before conducting exploratory case studies. She states that an essential feature of theory building research is the comparison of emerging theories with extant literature (Eisenhardt 1989). Researchers should consult current research to determine contradictions and similarities and ask why conclusions are different or similar (Eisenhardt 1989).

3.2.2 Case selection and unit of analysis

A major component of case study research design is to define the case (Yin 2004). A case can be an individual, a group, an organization, or some larger unit, in software engineering research they are usually software engineers, teams, different software, or methods (Runeson and Höst 2009). If the case is the same as the unit of analysis it follows that the case study is holistic, while if the units of analysis are defined as sub-units of the case, the case study is embedded (Yin 2004). For example, an embedded case study may treat companies as cases and individuals as units of analysis.

In qualitative case study research, cases are generally selected using theoretical rather than random sampling, which means they are deliberately selected so that they predict a similar result (Eisenhardt 1989). Eisenhardt (1989) recommends theory-building studies should rely on four to ten cases. A larger number of cases generally mean a higher degree of certainty, but with too many cases it becomes difficult to deal with the amount of information (Eisenhardt 1989).

3.2.3 Interview technique

Interviews is along with observations the most common primary data collection method for case studies (Eisenhardt 1989). Semi-structured interviews are the most common

kind for qualitative studies, since structured interviews are more suitable for quantitative data, and unstructured interviews are very time-consuming (Seaman 2008). In a semi-structured interview, questions are planned, but they are not asked in any particular order, and there is room for further exploration of topics (Runeson and Höst 2009). A list of questions, called an interview protocol, is used as guidance throughout the interview.

Semi-structured interviews rely on a combination of open-ended and specific questions (Seaman 2008). If potentially sensitive questions are asked, they should preferably not be posed until a climate of trust has been obtained between the interviewer and interviewee (Runeson and Höst 2009). It is always advisable to pilot-test the list of questions; the interview protocol, prior to performing the actual interviews (Easterbrook et al. 2008).

Interviews are preferably recorded, and in the ideal case also transcribed, however, transcribing is very cost inefficient, estimating that a one hour interview takes six hours to transcribe (Singer, Sim, and Lethbridge 2008). The disadvantage of not transcribing is that information may be lost (Singer, Sim, and Lethbridge et al. 2008).

3.2.4 Data analysis

When conducting quantitative research, the researchers put most of their creative and analytical effort into designing and planning the study. The statistical analysis that follows is relatively straightforward (Runeson and Höst 2009). Qualitative analysis however, cannot rely on detailed mechanical steps; conclusions must instead be drawn from linking together different data sources in such a way that the reader can follow the derivation of results (Runeson and Höst 2009). It requires ability to generalize and innovative thinking on the part of the researchers. Eisenhardt (1989) identifies within-case and cross-case analysis as distinguished steps of case study analysis.

Within case analysis is needed to deal with the otherwise overwhelming amount of data that most case studies involve (Eisenhardt 1989). The first step is detailed case write-ups, which are simply pure descriptions. The idea is to become intimately familiar with each case as a stand-alone entity before starting to generalize patterns across cases (Eisenhardt 1989).

The cross-case analysis searches for patterns between cases (Eisenhardt 1989). One tactic to cross-case analysis is to compare cases pairwise and note differences and similarities (Eisenhardt 1989). Another tactic is to select different categories, by Eisenhardt (1989) called “dimensions”, and compare them in turn between all of the cases to see if patterns emerge. Dimensions can be for example size of the company in the case, or performance

of the company. Tabulation is a related technique, in which coded data (chunks of data with relevant category or dimension assigned to it) is arranged in tables (Runeson and Höst 2009). Tabulation makes it possible to get an overview of the data (Runeson and Höst 2009).

3.3 Research Procedure

As an exploratory study, this thesis seeks to investigate the how and the why of organizational rule breaking. While some evidence suggests that rule breaking occur on all levels in organizations (DeHart-Davis 2007), to our knowledge there have not been any previous inquiries into whether newcomers to organizations break rules. Thus the subject is too unexplored to motivate descriptive or explanatory research.

3.3.1 Getting started

The interest in organizational rule breaking was sparked by a question about what happens when newcomers to companies find themselves caught in a hypothetical conflict between the part of an organization that cares about rules, and the part that cares about action (Brunsson 1989). If an employee needs to break rules in order to do their job well, then it ought to be in the employer's interest that newcomers learn how to break rule, so how would they learn that? Can it be taught?

An initial literature review on rule breaking in organizations found an immature research area, largely unbalanced towards deconstructive or illegal rule breaking in organizations. A breakthrough came with the discovery of the term "pro-social rule breaking" (Morrison 2006), which had sparked a number of subsequent studies, but none that focused on how rule breaking is learned, conceived or passed on between members of the organization.

The majority of the research papers used in the literature review were found through the search engine Web of Science. The search strings most commonly used were "pro-social rule breaking", "rule breaking organizations", and "rules organizations". Additional papers were found by going through the papers that referenced relevant papers, in particular Morrison (2006). All papers used have been peer-reviewed. A number of books were also used in the literature review.

3.3.2 Planning, cases and approach to sampling

We decided on a case study research design in which the primary data source would be interviews. We defined the unit of analysis; considering that workplace learning as well as rule breaking is concerned with behaviours by individuals, the unit of analysis was analogously defined as the individual new employee. The case in this study is equal to the unit of analysis, which is holistic and not embedded. This followed from the availability of interview subjects; since we could not get interviews with several newcomers at the same company, we could not treat the companies as embedded cases and the individuals as sub-units. This could possibly give us a biased reflection on how the situation is in the organization.

Theoretical sampling was used and cases were selected with the following criteria, in order to predict a similar result:

1. Companies should have at least a hundred employees
2. The newcomer should not have worked at their current workplace for longer than a year
3. The newcomer should not have more than five years of total work experience

The first criterion is based on the established theory that organizations, as they grow large, exchange control through mutual adaptation and direct supervision for control through rules, and become bureaucracies (Mintzberg 1980, Ouchi 1980). Since bureaucracies have more rules, we assume that they also have more rule breaking.

The second criteria is derived from what Nonaka (1994) says about knowledge becoming internalized with experience; we assume that it is easier for a newcomer to talk about how they learned and adapted, and are still adapting, to their workplace, compared to what it is like for an employee who has worked somewhere for a long time. More experienced personel may have been able to provide us with more examples on how and why rules were broken. However, there is a risk that they have forgotten about their learning process and the knowledge on how it is to adapt to a new working situation.

Interviews were arranged with newcomers at a number of large companies in the Gothenburg region and a few in Stockholm. The study relies on a total of ten cases. The amount of data that could be collected about each case in this study was limited due to practical reasons; such as that we only hade the possbility to do one hour interviews. This we have chosen to compensate for by having a number of cases in the upper range of the recommended number. An overview of the cases in the study can be seen in table 3.1.

Company	Area	Nr. Emp. 2012	Subject	Role
Alpha	Automotive software	100+	Adam	Developer
Alpha	Automotive software	100+	Alex	Developer
Alpha	Automotive software	100+	Anna	Developer
Bravo	IT solutions	1000+	Bella	Business Analyst
Bravo	IT solutions	1000+	Benjamin	Business Analyst
Delta	Online gambling	500+	Daniel	Developer
Delta	Online gambling	500+	David	Developer
Echo	Technology consultants	800+	Eric	Developer
Foxtrot	Analysis software	100+	Frank	Developer
Golf	Communication solutions	1000+	Gabriel	Developer

TABLE 3.1: An overview of the cases

The cases have been anonymized; both their names and their companies' names have been exchanged. The ten cases consist of two female and eight male employees. In the write-ups and analyses of the cases, the subjects appear as male or female randomly; a case subject may actually be male even if he is referred to as "she", only to increase the anonymity of the participants.

The majority of the interviews were conducted at the study subject's workplace, which meant that direct observations of the subjects' reactions could be included in the interview data. Workplaces will always indicate something about the organization (Yin 2004). The interviews were all about an hour long and semi-structured; performed like guided conversations rather than structured queries.

An interview protocol was designed and tested on two pilot cases prior to conducting the actual interviews. Bear in mind that since the interviews were semi-structured many of the questions were asked in a different manner than the way they are written in the protocol. In the next section we describe in-depth how the interviews were performed.

3.3.3 About the choice of data collection method

To gather data through interviews may not be the ideal method for achieving the purpose of this study, instead an observational study where employees' actions are recorded in their environment would have been preferred. The reason for this is that interviews tell us how the interviewees think they work. Which may be affected by what Kahneman (2011) defines as slow thinking, thus the actual intention behind rule breaking may remain unknown. However, the option of an observational study was not possible due to lack of time and resources.

3.3.4 Conducting interviews

During the first part of the interview we focused on what the respondent's work situation looks like, their formal and informal learning period, and their definition of rules. This gave us a good ground of information about what processes they use. This information we used to extract which kind of rules they acknowledge in their environment, what the purpose of the rules were, how they were enforced, and if there were some occasions when the rule were not followed. This enabled us to pitch down into the topics that we were looking on, if they had broken that rule, how they knew that they should break the rule, why the broken rule is not changed and how they would change it. With this unravelled we summarized the interview, queried the subject if there were anything he or she wanted to add, thanked for the time we had taken, and asked them to contact us if they came up with any additional information.

We quickly noticed a pattern in the interviews that the rule breaking related to code reviews was common. Therefore, if code reviews were not brought up by the interviewee, we asked them if the procedure existed in their environment when we discussed the processes their team were using. We also considered it as a good example to use when the subject in question had hard times thinking about what kind of processes that regulated their environment. This approach may be criticized for leading the subject into the matter, but we want to clarify that we only asked if they used the specific process, and from there we used the material as if they had brought it up themselves. Again, this is a qualitative study and we are not interested in how often rule breaking activities occur.

A concern that arises is that interview subjects may obscure the truth during interviews. We have little reason to believe that any of the interview subjects did this. Partly because of how we read their body language during the interview, but also because there is little gain for them to lie about have been breaking a rule. It would rather be more in their interest to obscure the truth about not breaking a rule; therefore defending themselves.

The interviews were conducted in a manner so that the subjects were first led to believe that its purpose was finding out how they learned the rules within their organization, not how they learned rule breaking. The intention behind this diverting approach was to mitigate the risk of the interviewees being defensive about talking about rule breaking.

The negative aspects this may have led to is that they could have had more examples of rules and possible rule breakings if they have had some time to reflect over the subject. Although we are quite pleased with the amount of data we unravelled and did therefore not change the method during the time period we were conducting the interviews.

The interviews were digitally recorded and the interviewees were ensured confidentiality; they would be anonymous in this report and the interview recordings were not to be shared with anyone else.

3.3.5 Analysing the data

Data was analysed through first handling each case individually. A note on each case was written immediately after the interview. The note was then elaborated through listening to the interview recording. Key points of interest were highlighted and obsolete information left out; key points being issues that touched upon our research questions. We tried to make sure each individual case text contained information about the following:

- Instances of rule breaking activity
- Motivation for rule breaking
- How the interviewee became aware of the rule breaking
- Why rules were not changed.

As the individual analysis were progressing, some initial patterns between the cases became apparent. A table was created in order to get an overview of the data. In the table, the cases were plotted against different key points of interests, for example “Work process”, “Why do you break rules”. The emerging patterns were written down and elaborated through iteration between individual and cross-case analysis.

Chapter 4

Results

The primary data collected is extracted from interviews with ten subjects within the software industry. In this chapter we present each case separately together with its points of interest and an individual analysis of the information collected. The individual analysis is meant to shed some light on the more specific information from each case, whilst the analysis and comparison of all cases will be presented under the analysis chapter.

4.1 The Cases

4.1.1 Anna, Alpha

Anna has been working for the company Alpha over a period of 10 months. She is a software developer in a team consisting of three additional software developers. They work in an agile environment that consists of development periods, sprints, which last for two weeks at a time. Before the start of each sprint the group of developers get handed a set of requirements, and these requirements are then distributed to the individuals in the group by their area of expertise.

When describing the environment they work in Anna mentions their build process; the process they use when they have written a piece of code and feel it is ready to be deployed to the master branch and for the application to be built. She defines the process as a rule but admits that they treat it more like a guideline. The process is described on the company intranet, and she was told by a more experienced colleague to look for the description there. She says that she personally follows the process description, but that her more experienced colleagues perform the build procedure from memory rather than following the process description.

Another procedure that Anna mentions is their code review system. Code review is the examination of code by another developer, with the purpose of ensuring that the code holds the wanted quality and to find any small mistakes that may have been left by the developer. She describes the code review procedure as a rule, and that the groups shall perform it before they are allowed to push code to the master branch of the system. The rule is enforced by a web application that monitors the system. In the application, the person doing the code review has to fill out an evaluation form where they state what have been done and the state of the code. However, Anna describes that the form is most often not filled out properly; instead of filling it out according to the specified procedure they put in dummy values and guesses. She explains that the reason for this is that they rarely find something that needs to be corrected during the code review, thus the procedure just creates unnecessary work for the team. They feel that they would rather spend time on development than on code reviews. As an explanation to how she knew she could break the rule, she says that it was because the other members of her team did it, which was easy to notice since they work so close to each other. She describes the way they break this rule as a sort of masquerade for the upper management.

Even though Anna describes the code review rule as repeatedly broken due to it being perceived as unnecessary, she argues that it is a good procedure that should in fact be used. She says that she would have used it if the other members of her team did so. When asked why the code review procedure is not removed due to the almost non-existent use, she explains that it is used throughout the company and is probably functional for other teams, thus it would be a bad idea to change it. She does not think it should be removed just for her team; it should either be removed completely or be used by everyone, and thus rather kept due to the rule essentially being good. She also thinks it is hard to change rules at the company in general, and does not know who to approach when doing so, but believes that one have to reach quite far up into the organization.

Points of interest

- Anna says her team seems to consider the build process description as only intended for newcomers
- The team breaks the code review rule since code reviews are not done properly, e.g. mandatory forms are filled with dummy values
- The team members' motivation for not doing code reviews is that they are time consuming and unnecessary
- Anna learned that the code review rule was broken by observing others

- Anna breaks the code review rule because the rest of his team break it
- Anna considers the code review rule to be essentially good and would not want to remove it

Analysis: Anna

It is a norm within Anna's work group that code reviews are skipped or not done thoroughly. We conclude that it is a norm because Anna picked up that the other group members were acting in a unified way. By observing how members of the group performed in the workplace Anna learned the norm and adapted to it.

When asked why she does not follow the rule, Anna says she feels that the rule does not generate any value to her work and that she can use the time to do other things; thus her motivation is to be more effective in her work. Anna contradicts herself when confronted with the choice whether to remove the rule or not; by stating that she would have liked to follow the rule because it is essentially good. Thus, Anna seems to disregard the code reviews because it is a group norm to think that code reviews are time consuming and unnecessary. Doing code reviews because she herself considers them as good would oppose the norm. It may be the case that Anna only describes code reviews as essentially good because she is forced to consider them from a larger perspective, or it may be that she would actually have liked to do code reviews in her day-to-day work but avoids deviating from the norm.

Anna's uncertainty on how rules may be changed within the organization indicates that such democratic changes are unusual and that the organization is generally rigid with a distanced rule-making part. A final interesting point to note is that Anna considers the build process description to be directed only towards newcomers and not to experienced employees. Thus, she calls it a guideline.

4.1.2 Benjamin, Bravo

Benjamin has been working at company Bravo as a business intelligence architect for eleven months. Before he started at Bravo he had a similar job at a smaller company. Benjamin is currently not working in a team but has been before. He describes Bravo as a process driven organization with processes that govern as rules over how people shall work. For each process there is a process owner who is responsible for the process and decides how it shall be executed. With the amount of processes they have at Bravo it is hard to ensure that everything you do is according to procedure, and old and out-dated processes are an issue.

Benjamin describes that if he encounters a problem for which the recommended process is not working, he generally steps outside the process and uses his informal network to solve the issue instead. Doing so is often a faster way than following the process description. As an example of when he had to go against the procedure, he mentions a process that describes the correct way of installing Microsoft SQL Server software on a server computer, a system critical to his work. The process describes step by step how to run scripts and which files to execute in what order. The problem that he encountered lied in one of the executable files that were not updated for the current version of the operating system. This created a situation in which Benjamin had to deviate from the process in order to be able to perform his work. In this specific case Benjamin and his colleague went to great lengths trying to solve the problem according to procedure before realizing it was impossible, thus time was wasted because of the out-dated process description. In the end it was Benjamin and his more experienced colleague who together decided that they had to deviate from the rule.

Another mentioned example of rule breaking concerns how they should be in touch with their customers. During Benjamin's formal training it was clearly stated that they should only use a single point of contact with the customer; i.e. one person on the team should handle all requests or questions. However, Benjamin describes how this rule was broken in his first project where it became norm to contact the customer directly when a question occurred, and it also happened that customers contacted team members directly with the requirements they wanted implemented. He describes that he learned to disregard the rule about single point of contact by observing other employees breaking it. He also mentions how management tried to enforce the rule when they noticed how it was being disregarded, and that their enforcement was successful to some extent.

Benjamin argues that a rule is something one should strive to follow, and if a process is not working it should be changed. He describes that if one wants to change a process, the process owner needs to be contacted, which is not always easy since the organization changes and people change workplace, and since it in some cases is not even documented who the process owner is. Benjamin explains that an attempt to change a process often ends up in a discussion about who the process owner is and the intention of the rule, but it rarely progresses further than that. He also says that even if the process owner was reached and the problem was aired, it is still not certain that something would be changed.

Points of interest

- At Benjamin's company they have a large amount of processes

- The processes are created and maintained by process owners
- With the large amount of processes, it is hard to ensure everything you do is according to procedure
- Benjamin says that in principle he does not have a problem with deviating from a questionable process description
- On one occasion, when installing software, Benjamin went to great lengths to try and solve the problem according to the process description before realizing it was impossible
- In Benjamin's previous project at the company, everyone broke the rule about not having more than one point of contact with the customer
- The "single point of contact"-rule was broken in order for people to more effectively perform their work
- Benjamin learned to break the "single point of contact"-rule by observing his colleagues
- Benjamin argues that in principle rules should be followed
- If a rule is not working, Benjamin thinks it should be changed, but he admits that changing rules is a lengthy process which requires you to first try and find the process owner

Analysis: Benjamin

Benjamin is contradictory in how he deals with rules; he says that deviating from process descriptions is not a problem, in his previous project everyone broke the "single point of contact"-rule. On the other hand he on one occasion went through a lengthy process to try to install software according to the process. Thus it is hard to interpret Benjamin's general opinion of rule breaking.

The software installation example is interesting because it is evident, at least in hindsight that this rule needed to be broken; circumstances made the rule irrelevant (Verkuyten 1994), the rule was out-dated and inapplicable in this situation (Olin and Wickenberg 2001), and Benjamin would have been able to more effectively perform his job (Morrison 2006). Why did Benjamin not break the rule? There are a number of possible reasons; Benjamin may not have had a rule-breaking personality (although he seems to want to express that he does) (Morrison 2006), maybe Benjamin's supervisor enforced the rule (Kirke 2010, DeHart-Davis 2007) or maybe Benjamin perceived the installation process

as more important than the "single point of contact"-rule because the first was written while the latter was not (DeHart-Davis 2007).

Our preferred theory is that in the "single point of contact"-case other members of Benjamin's team had broken the rule before and therefore Benjamin could rely on the norm for information about breaking the rule (Morrison 2006), while when it concerned the installation process, rule breaking required more conscious decision-making on his part (Baucus et al. 2008). A final thing to note is that the installation process, had it worked, would have entailed an extra benefit to Benjamin because the installation would then have been partially automated; since he deviated from the process description he had to install manually, which means the rule breaking action in this case meant more work compared to if the rule had worked properly.

Benjamin says that he thinks that rules that are not working should be changed, but admits that attempts to change processes generally are futile. Benjamin failing to apply the installation process description should have been an obvious indication to the company that this process needed to be updated, but it was not, and instead Benjamin was told to deviate from it. Supposedly, the process-owner-model makes it harder for management to update and maintain processes, since the responsibility of maintaining is placed in the hands of an employee who perhaps is less aware that updates are necessary and less inclined to put effort into streamlining the work environment.

Benjamin says that they have a lot of processes at the company. According to Ouchi (1980) a lot of rules means the decision maker must know which rule to apply in a given situation. The management might perceive many rules as creating a more stable work environment when in fact they are underestimating the skills and experience necessary to correctly evaluate the situation and apply the right rules.

4.1.3 Bella, Bravo

Bella has been working as a business analyst at Bravo for nine months. She currently works within three different projects, but two of them she has started in very recently. In the third project she works with customer support as a "key user", and receives and handles requests, incidents and problems from users. Bella's company has a lot of processes and as in Benjamin's case, she has to cope with process descriptions of varying quality aimed at regulating her work.

As a key user Bella's team works together with a number of specialists whose job is to create procedures, guidelines, and templates for the key users to use in their communication with the customers. The specialists are a comparatively small group; Bella says

that there are around ten specialists compared to a hundred key users. Bella likes some of the guides the specialists provide, but a number of them she finds are constraining her work; she is certain that her first priority is keeping the customers happy and that she does not accomplish that by following procedures. She describes how the specialists have sometimes praised her for following a procedure properly, but that she is mostly complemented by her managers for keeping customers satisfied. She points out that the specialists are probably more inclined to promote rule-abidance because they are not working as close to the users.

Bella mentions the following example of when she deviates from the prescribed procedure; the specialists have provided a set of questions for the key users to ask the customers when they receive requests from them. However, she learned from her colleagues that it is often unnecessary and just causes frustration. She says her colleagues suggested she ignore the bullet points. She thinks this particular rule is in place just because "some manager high up in the company wants to see certain information in a report".

Another example of rule breaking is that when Bella is asked questions within a certain area of expertise, she uses her informal network within the company and asks a person that she knows is knowledgeable within that area instead of finding the information the prescribed way, which would be finding it on the intranet. Asking her contact persons saves time. She started using this informal contact after getting in touch with him at a meeting and now she encourages her colleagues to do the same.

When she talks about rules and rule abidance, Bella is contradictory and even points out so herself. On one hand she thinks that the company would work better if everyone followed rules and guidelines, and she says she would have liked to have more rules, if they were good. On the other hand she says that she does not perceive herself as a "red-tapist", and is very certain that producing results matter more than adhering to rules. Red tape even seems to make her irritated. She does mention a theory about some rules and guidelines being meant mostly for newcomers, while more experienced employees are meant to work as they see fit. However, she states that if she would run into a written rule that she did not find sensible, she would discuss it with her manager or her colleagues to find out if she needs to follow it.

Points of interest

- At Bella's company they have a large amount of processes
- Specialists creates procedures, guidelines and templates for Bella and her colleagues to use when communicating with users

- Bella's customers find some of the procedures frustrating
- Bella was explicitly told by her colleagues that she did not have to ask the customer the prescribed list of questions when handling a request
- The specialists complements Bella when she is working according to process description, while her managers complements her for keeping customers happy regardless of the process
- Bella thinks her main priority is to keep customers happy
- Bella thinks that the specialists are more in favour of rule abidance because they work further from the users
- Bella says that she thinks that the company would actually work better if everyone followed rules and procedures
- When users asks her questions within a certain area of expertise, Bella asks a knowledgeable contact of hers instead of looking up the answer on the intranet
- Asking her contact is much quicker
- She took initiative to ask the contact
- States that she would ask her network about rules

Analysis: Bella

In Bella's key user team, there seems to be a consensus that their first priority is customer satisfaction; it is encouraged through complements from management, and Bella was explicitly told by her colleagues to deviate from the prescribed list of questions when communicating with the users. Bella's workplace seems to be a typical example of when a team gets caught in the crossfire between the priorities of the rule-making part of the organization, the specialists, and the part that cares about actions and results (Brunsson 1989). For Bella however, it is evident to prioritize results in her day-to-day work rather than rule-adherence.

Bella mentions that she goes through a contact for information instead of finding it on the intranet. This example is interesting because Bella took initiative to break the rule; she got in touch with a knowledgeable person and realized asking him was much quicker; a more effective way of working. Recalling that rule breaking is easier if another employee has done it before (Morrison 2006), let us look a little closer at this particular instance of process deviation. The culture within Bella's team is suggesting that keeping key users

happy is their first priority. The managers seem to be enforcing this culture. The fact that the process descriptions are coming from another direction than from the managers supposedly makes them easier to disregard when siding with the managers' opinions. Ouchi (1980) said that from the unified point of view that norms establish, members of the group can deduce to guide any situation, which is likely what happens in this example; based on customer satisfaction being their highest priority, Bella deduces that she can disregard the principle that information should be found on their intranet. Other contributing factors are probably that Bella may have a rule breaking personality, that her job is autonomous and that she works close to customers (Morrison 2006). Finally, perhaps the rule-makers does not, in fact, have anything against Bella breaking this procedure, but the rule is designed the way it is because they are unable to provide a contact person to ask.

Interestingly, Bella says that the company would probably work better if everyone followed the rules and procedures. She even admits to contradicting herself. Supposedly, Bella prefers rules in a large perspective but dislike them on an individual level; essentially, people tend to like it if others follow rules but think themselves capable of making better decisions on their own (DeHart-Davis 2007). What speaks against this theory is that Bella encourages her colleagues to use her contact person for information. It may also be the case that Bella does not always think her decisions through on a day-to-day basis (Kahneman 2011), but when forced to do so she thinks that rule breaking is essentially bad for the company. This theory is further strengthened when she debates that she would ask her network about certain rules, and if they need following; when she earlier have stated that she did not do it this way. A final theory and one which Bella actually talks about, is that she perceives rules as guidance for newcomers, but that more experienced employees are expected to be able to make decisions on their own.

4.1.4 Adam, Alpha

Adam has been working as a software developer at company Alpha for nine months. He is working in a team consisting of nine other employees. They work in an agile environment and use scrum as a process. He points out that they are happy with how the process works and their amount of freedom and autonomy. The managers at the company acknowledge his team's agile process as particularly good and other teams look at it for improvement suggestions.

Adam does mention that they are not doing code reviews entirely according to procedure. The code reviews as such are enforced by the company, but the group themselves have also created a formal rule that states that each developer may only have one task at

a time waiting for review by another team member. It is in particular the latter rule that is broken; they often have several code reviews pending. Adam describes how it has become gradually accepted to break this rule; it was followed in the beginning but became less complied with over time. He has broken it himself since he observed that others were doing it.

Adam says they break the rule about not having several pending code reviews because it ineffective to just wait for someone to review their code, so they take on other tasks while waiting and the tasks become stacked in the review system. When a team member has several code reviews pending, the others can see that in their intranet collaboration tool and usually give that person some remarks, such as "Well, how many reviews do you have pending?", but there are no other sanctions. The rule was implemented after Adam started at Alpha, following discussions during their sprint review meetings. It did not take long until people started breaking it. The group has even tried to introduce that particular rule once before and then eventually removed it.

Adam says that the important tasks always get reviewed sooner or later, but admits some other tasks never do. They are small tasks or fixes, and they are skipped because it is seen as time inefficient to review such minor things. This is actually a deviation from the code review rule as it is prescribed.

Points of interest

- The team's agile processes are acknowledged within the company as being very good
- The team has introduced their own rule about not having several tasks waiting to be reviewed
- The rule about not having several pending code reviews is frequently broken
- Adam learned to break the rule about not having several pending code reviews by noticing that others were breaking it
- They break the rule about not having several pending code reviews with the motivation that it is time consuming and unnecessary for them to just wait for code review to be done
- The rule about minimizing the number of pending code reviews has been introduced and removed once before
- Some small tasks are not reviewed at all because it is considered unnecessary

Analysis: Adam

Adam explains how a formal rule was created by the group to reduce the amount of pending reviews, but that the rule was broken soon after it was introduced and has become less and less complied with over time. Considering Morrison's (2006) and Desai's (2010) definition of rule breaking as an action that breaks an "explicit, active, and top-down rule", deviation from this rule is not actually rule breaking since the rule is not top-down. With this in mind however, considering both that the top-down requirement is debatable, and that breaking of a rule that the group enforce upon themselves entails some particularly interesting issues, we still want to study this instance of rule breaking.

The rule with the purpose of reducing the amount of pending code reviews functions as a local stage-gate system, in which the gate ("is the code review done?") is guarded not by a manager but collectively by the group. The rule is intended to make sure that code reviews are done, but if it was rigorously enforced it would actually stall work, which is in all likelihood a worse consequence for the team and the company than if code reviews would be left pending or forgotten. Adam quickly picked up that others were breaking this rule.

Since this rule about pending code reviews was created by the team they are aware of the intention behind it and are empowered to remove it themselves, so revising the rule would neither be complicated nor costly. The team still decide to keep the rule however and have even re-introduced it even though they removed it once before. Why is this? One theory is that the group may have two sub-groups, one that is in favour of keeping the rule and one that is in favour of rule breaking; Adam mentions one piece of information that indicates this, which is that a person who has a lot of code reviews waiting for review receives witty remarks about it. Witty remarks are a sanction intended to mitigate rule breaking (Granér 1994, Axelrod 1986). However, it is a mild form of sanction, which also indicates that the rule is not heavily enforced (Granér 1994). The rule may also be in place because the group want to present a more favourable face to the outside (Feldman 1984). A related theory is that the rule has a regulating effect even though it is frequently broken; keeping it signals to the group member that they should try to keep the number of pending code reviews to a minimum, which is enforced by the very mild form of sanction, while the rule-breaking norm simultaneously signals that following the rule should not be at the cost of stalling work.

4.1.5 Frank, Foxtrot

Frank has been working as software developer at company Foxtrot for six months. His team consists of designers, testers and other developers that work within an agile environment, which he describes as striving toward scrum. He says his team is autonomous; their project manager is new and is not completely familiar with the work the developers do, which allows them freedom to select tasks themselves. He says that they always select tasks with the success of the product in mind, since they feel responsible for the product. Frank describes that in general he is probably quite unaware of the company rules, he has not put any effort into investigating which rules apply to him and he has not been taught rules that come to mind even though his introduction process was formal.

About code reviews, Frank says that they are mandatory and that the rule is enforced by their collaboration system in which tasks are displayed as unfinished until review has been done. He explains that code reviews are done except for if the task is a bug that stretches over several versions of the system, in which case the bug is fixed and reviewed for only one of the versions. This could theoretically cause unforeseen problems due to differences in the code base, but Frank is confident in that doing code reviews several times for the same bug fix would just be a waste of time. He says that he was taught to break this rule by the leader of the engineering support team, whose responsibility is to release fixes to the market. Frank thinks that the rule serves a purpose in its simplicity even though it is broken in some circumstances, and he thinks that adding exceptions to the rule description would just cause those exceptions to expand.

Frank mentions some examples that indicate that his management are liberal in interpreting rules that apply to them. For instance; they use a stage gate model at the company, and after a stage called “feature complete” they are not allowed to add any more requirements to the update. However, the product management keep adding features even after feature complete.

Points of interest

- Frank describes his team as autonomous
- In general, Frank perceives his own work environment as unconstrained by rules
- He has an inexperienced project manager
- Code reviews are mandatory, but fixes of bugs in several versions of the system are only reviewed once

- Frank believes that reviewing the same fix for several versions would be "a waste of time"
- To not review bug fixes several times was taught to Frank by the leader of the engineering support team
- Frank describes how product management are liberal in their interpretation of rules that apply to themselves

Analysis: Frank

Frank explains how he was taught by the leader of their engineering support team not to perform code reviews more than once for bug fixes in several versions of the system, thus he was taught through a formal channel to break a formal rule, under the pretence that the rule is inadequate in certain situations. Frank seem to think that the rule is meant even by its creator to be broken when the situation calls for it, but that its serves a regulating purpose in its current simple and coherent form; that it would be broken even more if exceptions were added to it.

Frank also mentions how management disregard the company stage gate model. One can imagine that this would create a culture where rule breaking is seen as more accepted on the lower levels, but while Frank describe his work environment as autonomous and unconstrained, he does not mention many examples of rule breaking.

4.1.6 Daniel, Delta

Daniel has been working as a web developer at company Delta for three months. He is working in a team consisting of four other developers and one tester. They work according to agile principles and have a scrum-like process. He and his colleagues are able to choose their tasks freely from an already prioritized list of requirements. The product owner is the one who prioritizes. Daniel says that he thinks he has a lot of freedom in his work since he decides how to solve his tasks, and since he are able to select the tasks he likes to work with.

Daniel does not give any examples of what he would define as rule breaking. About code reviews, he mentions that they are meant to do them, but that they often do them carelessly, and sometimes skip them altogether. They find it boring to do code reviews compared with their other tasks. It has even happened that the team have had pending code reviews upon delivery, but Daniel himself has never left code reviews pending for longer than two days. Daniel is very reluctant to label skipping code reviews as rule

breaking however. Daniel describes his direct work environment as very informal. If he runs into problems in his work he always finds someone within the team to ask and tries not to spend long being stuck on an issue before asking.

Points of interest

- Daniel has only been working for three months
- Daniel and his teammates can choose tasks freely, but only according to the product owner's prioritization
- Daniel thinks that he has a lot of freedom in his work
- Even though he says that they are not doing code reviews as they should, Daniel cannot recall any examples of rule breaking
- Work environment is informal, Daniel learns through asking his colleagues

Analysis: Daniel

Daniel discussed that they are careless about code reviews, which is an action that is a conscious deviation from a company procedure, but he was hesitant to call the action rule breaking. However, we are still stating the example as a rule breaking action. This due to that they have a clearly defined process that they are meant to follow but intentionally deviate from, which fits the definition of rule breaking by Desai (2010) and Morrison (2006).

Daniel was also reluctant to mention any examples of formal rules within the organization. Instead he wanted to call the "rules" guidelines even though he admits that some of them are forced on the group. Why is Daniel so reluctant to label anything rules or rule breaking? There may be several reasons. First, he may be reluctant to admit rule breaking during the interview, but it would not explain why he is unable to give examples of rules. A factor that most definitely contributes to his vague answers is that Daniel has only been working at the company for three months, thus supposedly he has not yet started to analyse or question his environment. An adjacent theory is that Daniel is currently pleased with the limited amount of freedom they have within their work team; he does mention that he perceive them as having a lot of freedom even though all strategically critical decisions are made outside the team.

Rules substitute direct supervision (Ouchi 1980), but the way Daniel's work environment is designed, he seem to be shielded from making any critical decisions. The way he is

recommended to refer to someone else when he runs into a problem, and the fact that he cannot mention any examples of rules suggest that he may have a work environment which is controlled by a mechanism very near to direct supervision.

4.1.7 Gabriel, Golf

Gabriel has been working as a software developer at company Golf for ten months. His team consists of four other developers, three testers and a product owner. They have relatively recently replaced their old waterfall model with agile processes. The team is meant to be working fully according to agile principles, but they are restricted by old norms that still remain. These norms for example limit communication between the roles within the team, since some members are still used to them having separate responsibilities.

At the start of each sprint Gabriel's team is assigned a bundle of requirements by the product owner. They are then free to distribute the requirements between the members of their team as they find suitable. While the requirements are based on customer needs, the management think far ahead; they use a strategic approach to customer requests rather than an agile.

Gabriel explains how the different teams at the company are independent; they have their own way of working and there is a strong "not invented here"-mentality. If a good practice would develop within one team it would not be transferred to another. A consequence of the team autonomy is that they have different repositories for information, which makes is hard to find relevant written material. Much of the written material is also out-dated because the repositories are not maintained.

Gabriel mentions an old checklist process as an example of an out-dated and rigid rule. Before launch of a completed software update, they had to gain signatures with approvals from different authority persons within the company that guaranteed the quality. This process caused a lot of lead-time for the team due to people being slow on signing off on the update, and it could take up to weeks until completed. Gabriel says some people used to skip the checklist to save time, but he never had to personally. The problematic process was brought up at a sprint retrospective meeting about six months ago and has now been replaced in Gabriel's team. Implementation of the new process in underway in other teams, but it takes time.

Another frequently broken rule that Gabriel mentions is that his team is not supposed to have any contact with any of their customers; instead management shall handle all

contact according to contracts and other formal agreements. However, a customer representative recently joined Gabriel's team for a period of time, and they find themselves asking that person about change requests. Gabriel likes having the customer contact because he thinks it helps him to foresee what requirements the product management wants implemented in the future; thus it allows him to plan ahead. He describes that the initiative to ask the customer representative came as obvious to his entire team.

Gabriel says that management may perhaps recognize the value of being able to ask the customer representative about requirements, but that they are unable to change the rule about customer contact due to the formal agreements with customer, and besides management are more interested in long-term strategic decisions than accommodating immediate customer requests. He thinks that changing rules is hard at his workplace because people are so used to the way they are working that they are not motivated enough to bring about change. He thinks that if he really wanted to change something he would not bother with going through management, he would just try to change the way they work in his team.

Gabriel says that he thinks the lower management are opposed to removal of the old, rigid rules like the checklist because removing them means they lose control and insight. He also thinks people at the company in general are opposed to change because they are so used to working with their old rules.

Points of interest

- Gabriel perceive his company as overly rigid
- Although Gabriel's team is meant to be agile, old waterfall norms still affect the way they work
- His team managed to bring about change of the checklist procedure which was old and out-dated and caused a lot of lead-time
- Gabriel's team are not meant to have direct contact with customers according to contracts, but they are currently working together with a customer representative who they ask about customer requests
- Gabriel and his team jointly decided to start asking the customer representative
- They ask the customer representative in order to be able to plan ahead and save time
- Gabriel thinks lower managers oppose changing rules because they are afraid to lose control and insight

- Gabriel notes how management care about long-term decisions while he and his colleagues plans for a shorter time frame
- Gabriel thinks that members of the organization oppose change because they have gotten used to the current rules

Analysis: Gabriel

Gabriel sees his company as rigid and seems to be frustrated with the amount of old norms that remain and constrain change. It is apparent that rules at the company are not changed through incremental adjustment, as is the ideal in the theory of organizational change (March, Schulz and Zhou 2000). He perceives his lower management as opposing agile practices because they are afraid of losing control. If bad rules persist it may well be because some part of the organization enforces it to protect their own interests (Desai 2010). Bad rules may also persist because it is costly to change them (Desai 2010).

Gabriel's scenario is complex and hard to interpret without breaching the boundaries of the topic of this study. While he feels constrained by both old norms and old formal rules, his team actually managed to change the out-dated checklist procedure. Perhaps the procedure caught management's attention since it caused lead-time and was thus an obvious performance problem; recalling Desai's (2010) theory on that companies look for new rules when encountering performance problems. Supposedly managing to change the rule would make Gabriel perceive his environment as less constrained, but he still perceives lower management as rigid and his colleagues as wanting to work according to old habits.

Gabriel knew he could have broken the checklist rule if he needed to because his colleagues taught him so. Regarding the other instance of rule breaking, they jointly decided to start asking the customer representative, they were being opportunistic and doing so was an obvious choice. This second scenario is also hard to interpret because it is difficult to understand the management intentions behind bringing in a customer representative to work on their team.

The fact that Gabriel suggests he would try and change the way they are working by promoting change within his team rather than going to management suggests that the teams really are autonomous and that the rigidness of the company should not cause him to feel constrained. Perhaps the actual problem lies within the established norms of the group which, recalling Feldman (1984) and Axelrod (1986), can exert tremendous power over behaviour.

4.1.8 David, Delta

David has been working as a web developer at company Delta for eight months. He is currently working in a team that consists of nine developers. They are using agile processes and he describes the environment as flexible. Like in Daniel's team, David's product owner has already prioritized the tasks and the team are free to select amongst the ones with the highest priority rating. The way they work is they select tasks, study them and break them down into steps and then present the steps to the rest of the team during a planning meeting before doing any actual coding. About code reviews, David says that while they are mandatory they sometimes skip them and they are not done as consistently as they should be. He personally learned that he could skip code reviews because his teammates were skipping them. They disregard code reviews because they are not seen as important in their day-to-day work; they rather prioritize coding. He describes how the code review rule was introduced after he started at Delta and it is still very new. They have lately started to try and enforce the code reviews because they realize that they are good in the long run.

Points of interest

- David and his teammates can choose tasks freely, but only according to the product owner's prioritization
- Thinks he has a lot of freedom in his work
- David says that they sometimes deliberately skip code reviews
- David learned that he could skip code reviews by observing others
- They skip code reviews in order to save time in their day-to-day work
- The code review rule was introduced after David started at Delta and it is still very new
- David thinks that the code reviews are good in the long-run

Analysis: David

David's scenario is very similar to Daniel's; his team gets to select their tasks but only amongst the ones that the product owner has already prioritized and David thinks he has a lot of freedom in his work. Like Daniel's, our interpretation of David's workplace is that he is shielded from making critical decisions, but still has an adequate amount of

freedom that suits him well this early in his career and his seems to be an ideal learning environment.

The code review rule is disregarded, but David recognizes that it should be followed because it is good in the long run. Teams seem to force a certain type of rules upon themselves in order to avoid shortsighted decisions much like an individual would to avoid fast thinking. Then of course we are reluctant to follow the rule since authority does not sanction breaking it.

4.1.9 Eric, Echo

Eric has been working as a software developer at Echo for eight months, and previously had a similar developer role at another large company for a year. He has also worked as freelancer. He is a consultant and works with short projects that the company builds for the customer in-house. His role is comprehensive and involves coding and software architecture as well as contact with the customer.

Eric usually works in teams, but the composition and size of the teams differ a lot for each project and he currently works alone. They have a process description, which suggests scrum practices, but Eric says that they apply the methodology they feel is right for each project, they would not use a procedure if they did not find it useful. They always try to incorporate some agile procedures however.

Eric says that the company has a lot of old, out-dated and inapplicable rules. For example, there are a lot of rules that restricts handling of customer data that would constrain his work to an unreasonable extent were he to apply them. They do not fit the organization or the technology they use today. He thinks that the reason why they are not updated is because of economical constraints, the company does not prioritize searching for new rules and procedures.

Eric thinks that there are probably good process descriptions at the company as well, but that they are stored in a company database which you rarely have time to check when you are involved in work. He also says that process descriptions are probably more important if you develop internally. For him working so close to customers makes it obvious that keeping them happy is his first priority. His work is constrained by customers and the customers' main priority is usually economic; Eric often has to work under tight time constraints. He wishes he could sometimes prioritize writing really good code, thus doing code reviews and other quality improving measures, but the customer is not interesting in paying for such "excess".

Eric is uncertain on how he knew how to break rules, but he believes it is because everyone else were doing it, and certainly because he has previous work experience. Eric is even familiar with the concept of pro-social rule breaking and has an interest in the rule-breaking personality. He thinks that people with work experience are generally more confident in breaking company rules; if you come to a workplace already knowing procedures that work you will have them to rely on.

Points of interest

- Eric has an extensive role covering both coding and customer interaction
- Eric works in short projects that vary a lot in size and composition
- The company has many out-dated and inapplicable rules
- Rules are not updated because the does not want to prioritize it financially
- Eric's teams apply the methodology they find useful in each project
- Since Eric works so close to customers he thinks his priorities are obviously set by them
- The customer's main priority is usually to keep down the expenses, which means Eric works under time constraints
- Eric is aware of the concept of pro-social rule breaking
- Eric thinks his previous work experience makes him a lot more confident in breaking rules that need to be broken

Analysis: Eric

Eric is certain that his main priority is to make the customers happy, which leads to him having little regard for procedures that just slow down his work. He is very unconstrained by rules and practices and confident in that he makes the best prioritizations and decisions on his own. While he is actually caught in the crossfire between rules conceived by the company and customer demands he finds the decision to prioritize the customer as obvious. Morrison (2006) says breaking rules to keep customers happy is one of the most common motivations. Eric's confidence in prioritizing customer satisfaction probably comes partly from it being a norm amongst his co-workers, and partly from his superiors; he would likely be sanctioned if he failed to keep customers happy but he is not sanctioned for not following procedures. He says himself that his previous work

experience gives him the confidence to be unbureaucratic, and surely if he knows procedures that work he can obviously rely on them rather than the company's prescribed methods.

Another contributing factor in making Eric confident to break rules may well be that some rules are obviously out-dated and inapplicable. Eric thinks that rules are not updated or changed because the company is not prioritizing it financially. Desai (2010) says that companies only search for new practices when they encounter performance problems, and since Eric and his colleagues seems to make a good job by disregarding bad and out-dated rules, the bad rules and the rule breaking is not going to catch managements' concern. Unless the company encounters performance issues, the rules will likely become less and less connected to how members of Eric's part of the organization perform their work.

Eric makes an interesting point in arguing that he as a more experienced developer has less need for processes compared to a newly hired. One of the purposes of rules is said to be to socialize newcomers into the organization (Desai 2010), and obviously having experience of previous situation gives a person more confidence to make decisions.

While Eric is unconstrained by rules, he feels he is instead constrained by customer demands; thus even though he is autonomous he does not perceive himself as having latitude in how to perform his work. Eric could be perceiving himself as constrained because he is comparing his current work with previous experience as a freelancer, but more likely, accountability and responsibility are just very constraining fs.

4.1.10 Alex, Alpha

Alex has been working as a software developer at company Alpha for nine months. He is Chinese and has some work experience from China. He studied in Sweden for two years before starting at Alpha, and describes how he found Sweden very different from China to begin with; he had no idea what unions were for example. He had time to get used to Swedish society during his studies, but he still finds some parts of the Swedish work system as strange.

Alex's team is not using agile methodology. They have separate work roles and Alex is assigned requirements by his project manager. The project manager in turn receives the requirements from a higher hierarchical level. Alex never communicates with customers directly.

Alex says that while they have rules at his workplace they are not very strict; they tell you what to do but not how to do it. Compared to China this is a lot of lateral.

He appreciates that in Sweden rules can be discussed, in China everyone just follows rules blindly to avoid getting sanctioned with a salary reduction or unpaid overtime. He thinks it is much more effective to have few rules that are negotiable. He also says that as long as rules are logical, they should be followed because doing so reduces errors and saves time. He also recognizes however that some rules may be bad, and thinks that in such cases they remain just because people have gotten so used to them. He is not absolutely certain whom he would approach if he wanted to change a rule, but probably project management first.

Alex mentions that the code review rule they have is broken for several different reasons; first, he systematically disregards the rule in urgent cases when code needs to be checked in quickly, because he was told by his manager to do so. In such cases they do not even test the code. Alex says that in urgent or special cases rules may always be ignored. Alex has also checked in code without review because he assigned code review to a colleague who did not perform it for several days. In the latter case he was not told to break the rule, but since his colleague was not doing the review as he should have, he figured he had to check in the code anyway. When he checks in unreviewed code it is visible in their intranet system, but he did not receive any remarks about it so he figured that is was not frowned upon.

Points of interest

- Alex compares working in Sweden with his previous experience working in China
- Alex prefers the liberal Swedish work system over the strict Chinese one
- Alex thinks that workplaces function better if rules are negotiable
- Alex thinks bad rules remain because people get used to them
- Alex thinks that rules that are logical should be followed to reduce errors and save time
- Alex thinks that rules may be broken in urgent or special cases
- Alex has broken the code review rule in urgent situations because he was told by his manager to do so, it saves time
- Alex have also broken the code review rule because his colleague was too slow reviewing his code

Analysis: Alex

Alex has work experience from a country with a radically different approach to workplace rules. This makes his points of view interesting, but perhaps problematic to compare to the other cases. Alex explains how organizations in China force people to follow rules, with punishment as a tool to enforce rule abidance. He says that the liberal Swedish work system is more effective than the Chinese because employees are empowered to think for themselves and be innovative. His reasoning may be due to selfish incentives; it is obvious that the Swedish liberal rule system is better for the individual, and even though Alex says that it is the organization that benefits from it, he may be thinking that it is better from him.

Alex was told by his manager to abandon the code review rule when under time pressure. However, he has also deviated from it because a colleague of his failed to adhere to his part of the rule; because the colleague failed to review Alex's code within the expected time Alex checked in the code without review. It is hard to determine in this latter case to what extent he was "forced" to break the rule or whether it was initiative on his part. He states that it is justified to break rules in situation that are not accounted for, and he generally seem to have a very well-reasoned perception about when he thinks rule breaking is good or bad.

Alex thinks that bad rules may remain just because people get used to them, which complies with the statement about organizations tending to ignore early indications that rules drift from how people actually work in the organization (Desai 2010). One of the things he mentioned as positive about the Swedish work culture is that rules are negotiable, but at the same time he mentions how bad rules remain; perhaps what he actually appreciates is that people are empowered to be liberal in their interpretation of rules in some situations.

4.2 Summary of the Case Results

	Alpha			Bravo		Delta		Echo	Foxtrot	Golf
	Adam	Alex	Anna	Bella	Benjamin	Daniel	David	Eric	Frank	Gabriel
Time in company	9 months	10 months	10 months	9 months	11 months	3 months	8 months	8 months	6 months	10 months
Prior work experience[1]	No	Yes	No	No	Yes	No	No	Yes	No	No
Performed rule breaking	Yes	Yes	Yes	Yes	Yes	Yes, but did not recognize it	Yes	Yes	Yes	Yes
How did she learn how to break rules?	Observation	Initiative	Observation	Initiative	Observation	Observation	Observation	Initiative	Socialization	Observation
Gains for rule breaking	Save time	Save time	Save time	Customer satisfaction	Save time	Save time	Save time	Customer satisfaction	Save time	Save time
Reason for rule breaking	Others did it	Someone else broke the rule	Others did it	Autonomous	Others did it	Others did it	Others did it	Autonomous	Told by manager	Others did it
Why are rules not changed		Laziness	Good rule; others use it		Uncertain			Economical constraint; stakeholders defend	Hard to define exceptions for the rule	Stakeholders defend; maintained by norms; uncertain how to do

1) Full time work within an organization other than current and longer than 6 months.

TABLE 4.1: An overview of the more interesting rule breaking actions listed in the cases.

Chapter 5

Analysis

The previous section presented the data collected from the ten cases in this study and interpreted the cases individually. In this section we compile the cross-case analysis; the cases are compared with each other and with literature, and data is triangulated into propositions. Here the reader will be able to follow the theoretical reasoning, while in the next section the conclusions are presented briefly in relation to the research questions. The analysis draws both from unique data derived from single cases, and from data, which is drawn from all of the cases and triangulated.

All of the case subjects gave at least one example of an action, which we define as rule breaking, given the following definition:

> *An employee's voluntary and intentional departure of behaviour from rules that are explicit and active.*

The definition is based on Morrison (2006), excluding the requisite that that rules need to be enforced top-down. Given that rules may be created by a rule making part other than management (see Bella's case) or by the team itself (see Adam's case), the top-down requirement is deemed irrelevant.

The number of examples of rule breaking actions provides a comprehensive foundation to analyse how people learn to break rules, why they break rules, and why the rules that are frequently broken are not changed or removed.

5.1 Rules Need to be Broken

Baucus et al. (2008) argued that rule breaking in organizations is inevitable because it is impossible for rule makers to anticipate all possible problems, and as a consequence

employees will face situations for which rules offer little guidance or elicit flawed responses (Baucus et al. 2008). Rules are created by some part of the organization which perceives itself as having greater experience, superior judgement and a better grasp of schedules and constraints than its subordinates (Baucus et al. 2008). However, rule makers are, no less than the receiving end of rules, affected by their limited perspective and a more or less conscious self-interest. Therefore rules are never infallible.

The case subject Alex had work experience from China, where organizations force people to follow rules through punishing rule disobedience with unpaid overtime or salary reduction. Alex was certain that Swedish workplaces work better because rules are approached radically different compared to in China. He appreciated that employees in Sweden negotiate rules instead of following them blindly. Alex likely responded the way he did partly out of self-interest; since negotiable rules naturally benefit the rule-receiver more than the rule-maker. However, given that the cases show several examples of organizations that seem to function well despite rule disobedience, we may derive that the gain from a rigid rule system is small, while the loss at the receiving end is significant.

The opposite extreme of an organization with a rigid and heavily enforced rule system, would be an organization entirely without rules. However, rules are not just a means of management to control their subordinates, several researchers claim that they have other purposes; they serve to protect the people who are subject to them (Desai 2010), they socialize new members into organizational activities (Desai 2010), and we derive that they serve as a guiding mechanism even though they are frequently broken (see Adam's case).

At the receiving end of rules, rules guide, protect and create stability, but need to be negotiable by the people who are subject to them. Rules only actually hinder creativity and innovation when they are being blindly followed due to a culture that harshly punishes rule disobedience.

5.2 Rule Breaking is Learned Through Observation

Each of the ten case subjects gave examples of how they learned to break rules. The responses were largely uniform; most of the subjects said they learned to break the rule in question from *observing someone in their environment breaking it.* This indicates that how to break rules is tacit knowledge which is transferred through socialization (Nonaka 1994). This is hardly a surprising finding; the respondents were unaccustomed to talk about rule breaking actions, and it is a sensitive subject, which indicates that the knowledge is tacit and rarely talked about; rarely made explicit. Instead newcomers

pick it up through observing and adapting to others' behaviour. Norms can be used to explain this; norms are the actual behaviour of the group coupled with expectations about others' behaviour. When the newcomer is observing someone in their environment breaking a rule and then adopting to that behaviour they are learning to adhere to a norm.

The following are the responses to how the case subjects learned to break a rule:

1. Observing someone in their environment breaking the rule (7/10)
2. Was explicitly told to break the rule (3/10)
3. Took initiative to breaking a rule (3/10)

Three respondents said they were *explicitly told by someone* to break the rule in question, which contradicts the previous findings about rule breaking rarely being talked about. When the subjects were explicitly told by someone to break the rule it was either by a colleague (Bella's case) or by a manager (Alex, Frank). When they were told by a manager, it concerned breaking a rule in a specific situation; Frank was told to skip code reviews for the same fix in several versions of the system, and Alex was told to skip code reviews when a fix needed to be committed fast. Supposedly, it possible to talk about rule breaking specifically when it concerns consistent exceptions to rules, this possible connection is illustrated in figure 5.1. When adding exceptions to rules, managers should be aware that the interpretations of rules change. This topic is explored further in section 5.2.2.

FIGURE 5.1: The results indicate that when newcomers are being told by a manager to break a rule, it concerns breaking the rule in certain specific situations.

Of the three subjects that took initiative to break rules (Alex, Bella, Eric), each explained how they were able to take that initiative. Alex said he felt forced to break a rule when a colleague had already broken another rule. Alex argued that the purpose of breaking the rule he broke was to fix the consequences of his colleague's abandonment of rules. Alex may have learned through the other rule being broken that rule breaking was tolerated, and he may have felt that his rule breaking was justified, even if it was not as necessary as he describes.

Bella mentioned she had observed her colleagues breaking other rules before taking initiative to break the rule she broke. Eric says his previous work experience gave him confidence to break rules the rules he perceived as counter-productive. Bella and Eric

both gave the impression that they have what Morrison (2006) calls "rule breaking personality" and DeHart-Davis (2007) calls "unbureaucratic personality"; they are risk-taking and non-conformist and show empathy for their customers. Thus, we see a connection between unbureaucratic personalities and tendency to take initiative to break rules.

Bella and Eric's cases had another similarity, which is that they work close to customers. It could be that working close to customers produces unbureaucratic personalities, or that they work close to customers because they have unbureaucratic personalities. The former theory is supported by Morrison's (2006) statement about wanting to help customers being a common motivation for breaking rules. See figure 5.2 for a summary about possible connections between concepts found in Bella and Eric's cases.

Verkuyten (1994) concluded that rules may be broken when a principle takes precedence over the principle that a rule should be followed. Both Bella and Eric indicated that they had a clear sense that their main priority was to keep customers happy. Supposedly they could deduce from this priority that breaking rules was appropriate. According to Ouchi (1980) members of a group can from norms deduce rules to guide them in any given situation, Bella and Eric both indicated that they had strong norms within their group about prioritizing customers.

FIGURE 5.2: There are possible connections between working close to customers, unbureaucratic personality and initiative to breaking rules.

5.2.1 It is impossible to explicitly teach rule breaking

Since a certain type of rule breaking actions are potentially beneficial for organizations, it is tempting to search for a way of teaching new employees to adapt to this behaviour; teaching them to engage in pro-social rule breaking, to use Morrison's (2006) term. We encountered two cases in which newcomers were told by their managers to break rules (Alex, Frank). However, Frank pointed out that the reason for management not to add exceptions to the actual written rule is because the rule would then be weakened, and subsequently even more broken. The result is that adding exceptions to rules makes them diminish in strength. What Frank is describing is that you can never speak about what we call the interpretation system, which we elaborate on in section 5.2.2.

5.2.1.1 Employees can be taught to prioritize

Bella and Eric had a clear sense of how they were expected to prioritize; to always put customer satisfaction first. Their priorities guided them to break rules, or essentially; caused them to break rules. If priorities can be taught, it may indirectly equal teaching rule breaking. Bella perceived her managers as encouraging her to prioritize customers first; which would mean that Bella was indirectly taught rule breaking. However, in Bella's case it is evident that the interests of the rule-making part (the specialists), is opposing the managers' interest; there is essentially a conflict between actions and rules as concurring with Brunsson's (1989) statement, and Lina is caught in the crossfire. If managers need to teach their subordinates to prioritize something else than the rules, it means their interests are opposing those of the rule-makers. Ideally, rules and the correct prioritisation from an organizational perspective should coincide. Thus, employees can perhaps be taught to break rules through being taught to prioritize something above the rules, but it is a symptom of an underlying conflict of interests.

An additional note on prioritization is that working close to customers most likely results in employees prioritizing customer satisfaction (as was illustrated in figure 5.2) regardless of whether management encourages the behaviour. This is supposedly a perk of human nature; we are short sighted (Kahneman 2011) and empathic, and a happy customer appear more significant to us than a correctly carried out procedure.

5.2.1.2 Employees are expected to learn to break rules

Eric argued that employees with more work experience have a higher tendency to take initiative to break rules. Other case subjects (Anna, Bella and Eric) argued that some rules were only intended to guide newcomers into the organization's practices, and that employees were later expected to abandon them. These statements indicate two things; that rule breaking is learnt through experience, and that employees are expected to learn how to deviate from or abandon rules. It seems organizations expect newcomers to follow rules until they are able to decide when it is appropriate to make independent decisions.

5.2.1.3 Never speak of the interpretation system

In a sense, rule breaking is taught at the same time the rule is taught. The norm system, which interprets rules, is coupled together with how rules are communicated and whether rule breaking is sanctioned or not sanctioned. The cases have shown that rules are broken even though rule breaking is not explicitly taught or allowed. Instead,

the norms interpret rules in such a way that they, the norms, allow rule breaking to some extent. Now imagine that making exceptions the rule would be brought up by the rule-maker as a viable option to following the rule. The norm would instantly change to allow for even more deviation from the rule. The idea is portrayed in figure 5.3. Thus, when interpretations are spoken of, the interpretation changes.

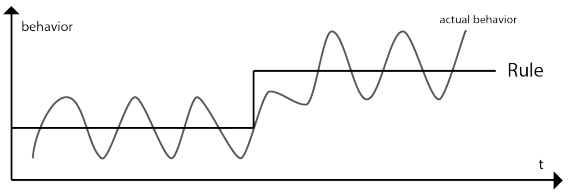

FIGURE 5.3: A simple drawing which illustrates the idea that rule breaking relates to how strict the rule is. If the rule is updated, or given an interpretation, so is the rule breaking. Therefore one can se how the rule breaking is shifted in comparison with the original rule.

5.2.2 The interpretation system explained

Norms are the actual behaviour of a group coupled with expectations about how members should behave (Axelrod 1986). From this follows that an organizational member does not actually adhere to a rule but to a norm. The difference between a rule and a norm is that the norm includes an aspect of interpretation of the rule. We call this part of the norms the interpretation system. It tells the group member how and to what extent the rule should be followed.

The interpretation system, like rule breaking, is tacit and communicated through socialization (see section 5.1). It is normally not made explicit. If group members discuss how they interpret a rule, it leads to the rule being interpreted differently; if an interpretation is made explicit, it changes. The interpretation system is thus a frame of reference which is known by all members of a group but which can never be mapped out or documented because it would then turn into something different. There is also an individual aspect to the interpretation system since different persons are inclined to interpret rules differently.

5.3 The Norm is to Break Rules to Save Time

The case subjects' motivations for breaking rules were largely uniform. Motivations are defined as the benefits they perceived were to gain from abandoning the rule. Almost all of the respondents claimed that they broke rules in order to *save time* (all case subjects except Eric). All of the case subjects who worked close to customers answered that they

broke rules in order to *satisfy the customer* (Bella, Eric and Gabriel). These results correspond with Morrison's (2006) findings on motivations for breaking rule, except she also found that colleagues broke rules in order to help their colleagues. The most common motivations for breaking rules were thus the following, in descending order:

1. Break rules to save time (9/10)
2. Break rules to satisfy the customer (3/10)

However, breaking rules to satisfy the customer was the main reason for all of the respondents who worked close to customers.

Several case subjects claim they broke the rule in question because they encountered a specific situation for which they deemed it inapplicable (Anna, Alex and Frank). These were either situations in which time was a critical factor, or it was situations in which the risk of breaking the rule was perceived as exceptionally small. A number of other case subjects say they broke the rule in question because it was out-dated (Benjamin and Eric).

Half of the case subjects (Adam, Anna, Benjamin, Daniel, David and Gabriel) admitted that they broke the rule in question because the rest of their team was deviating from it. This response may indicate that the case subjects' own rule breaking behaviour lacks in conscious interpretation and risk analysis. A number of the case subjects (Anna, Benjamin, Bella, Gabriel) even said that they liked the rule in question, and would have preferred to follow it. If rule breaking is part of the norm within a team, the consequence may be that newcomers adhere to it without understanding the consequence of their action. There are however two ways of interpreting the respondents' contradictory statements and behaviour; either they actually wish they could follow the rule, or they just decide that the rule is good when the interviewer forces them to reflect over it.

Reflecting is something Kahneman (2011) describes as slow thinking. In the moment when the case subjects break rules it may be that they do it out of habit; or fast thinking (Kahneman 2011). It is not until they are forced to use slow thinking that they realize the value of the rule, and therefore express that they wish the team were following it. A variant interpretation is that the respondents perhaps want other people to follow the rule, while they consider themselves capable of deviating from the rule in appropriate ways (DeHart-Davis 2007).

5.3.1 Pro-social is a matter of perspective

The term pro-social rule breaking coined by Morrison (2006) is defined as when an individual consciously perform a deviant action with the primary intention of benefiting the organization or its stakeholders. However, although an employee considers an action as beneficial does not necessarily mean that it is. With the term "pro-social", authors avoid debating what beneficial for the organization actually means, because they base it on the intention of the employee.

Several of the case subjects in the study perceive their rule breaking actions as beneficial for the company. However, many of the actions they mention are the result of obviously shortsighted decision making, in particular the avoidance of code review procedures. The action may also be good on a micro level in the organization; the specific sub-organization sees it as beneficial, while other parts of the organization perceive the same action as deconstructive. The latter theory is particularly relevant for the rule-breaking actions employees do to help customers. While the employees who work close to customers perceive that they do a good job by keeping customers happy, granting favours and avoiding procedures may result in an over-abundance of work, or lack of basis for strategic decision-making within another part of the organization.

Thus, the term pro-social rule breaking is problematic as soon as the perspective of the action is widened from the individual employee. The term does however, function as a marker of the abandonment of rule breaking as an unambiguously negative term, and sets the scope for a new body of research.

5.4 There is Resistance Towards Changing Rules

To consider why broken rules are not changed is relevant when studying rule breaking because then we avoid the simplification of antagonizing the rule making part. Table 5.1 plots examples of rule breaking actions against concepts that are related to change or removal of rules. The rule breaking example for each respondent in the table is the one that the respondent described in most detail, namely:

- Anna: Code reviews were often skipped
- Benjamin: Abandoned installation procedure
- Bella: Did not ask customers the prescribed list of questions
- Adam: Had several pending code reviews even though they were supposed to only have one

- Frank: Skipped code reviews for bug fixes in several versions of the system
- Daniel: Code reviews were often skipped
- David: Code reviews were often skipped
- Eric: Ignored procedures for handling customer data
- Alex: Code review were skipped in urgent cases

As seen in the table only two of the case subjects had actually attempted to change a rule; Benjamin tried to change the installation procedure because he wanted it to work, and Gabriel's team had managed to bring about the removal of a cumbersome checklist procedure. Interestingly, inclination to change rules had no connection with whether the respondents were aware of how to change rules.

	Adam	Alex	Anna	Bella	Benjamin	Daniel	David	Eric	Frank	Gabriel
Rule is sometimes followed	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	No
Subject has taken action to change rule	No	No	No	No	Yes	No	No	No	No	No
Subject thinks the rule is good	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No
Subject knows how to change if wanted to	Yes	No	No		No[1]	Yes	Yes	No		Yes[2]
Subject thinks same rule applies to other teams	No	Yes	Yes	No		No	No	Yes	Yes	Yes
Subject thinks rule is made by a distant rule maker	No	Yes	Yes	No	Yes	No	No	Yes	Yes	No

1) Thought he knew, but turned out he did not.
2) Yes, but it takes time.

TABLE 5.1: Examples of rule breaking plotted against concepts that relate to changing rules

The case subjects were generally reluctant to the idea of changing or removing frequently broken rules. When posed with the option, the majority of the respondents answered that they actually like the rule in its current form. They appear as if they have gotten used to the rule and prefer to relate to it in its current form. The contradiction between the perception of rules and the handling of rules was touched upon in section 5.3, where we speculated that employees break rules out of habit but when they are forced to think about the rule, they perceive it as good. In section 5.4.1 we pose yet another theory to why people like the rules they frequently break.

While table 5.1 indicates that employees are reluctant to changing the rules that apply to them, managers are considered to put up resistance towards changing rules as well; as was perceived by both Gabriel and Eric. Gabriel thinks that they are reluctant towards it because they are afraid of losing power and insight. Buchanan and Badham (2008) describe how change can dislodge power from members of authority, who can thus be reluctant to allow change to happen. Eric thought his managers were reluctant to

bring about change of outdated procedures because it would be costly. Eric's statement concurs with what Desai (2010) says about organizations only caring about rule breaking when they detect performance problems.

5.4.1 A broken rule may still be effective

As seen in table 5.1 there is a connection between the respondents thinking that the rule is essentially good, and they sometimes follow it. "Sometimes following" is a fuzzy definition, but means that they follow or break the rule based on some criteria; for example code reviews are skipped for small tasks or in urgent cases. The extent to which they follow the rule vary from frequently abandoning it to only doing so in very specific situations; compare Adam's case (frequent) to Frank's (seldom) for example. Thus, seven of the respondents were not abandoning the rule completely and they were neither interested in removing it. More interesting is that they were not interested in changing it either; they did not want to adapt the rule so that their actions were not considered rule breaking. The connection is illustrated in figure 5.4.

FIGURE 5.4: There is a connection between following a rule in certain cases and not being interested in changing it.

Verkuyten (1994) showed that people act in relation to laws even though the laws are frequently broken. For example; even if most people in Sweden always drive above the speed limit, they only drive slightly above it. We proposed in section 5.2.1 and illustrated in figure 5.3 that the interpretation system allow employees to deviate to some extent from the rule. Depending on how rigorous or harsh the rule is considered, the extent of the rule breaking will vary. If the rule would be changed to accommodate the rule breaking behaviour, it would be even more broken. The employees are supposedly aware that this is how the interpretation system functions. In mundane terms they may say as Alex did, "People have gotten used to this rule". Essentially, that a rule is being broken does not mean it is useless; it probably still functions as a regulating mechanism.

Chapter 6

Conclusion

The previous section made some propositions about how employees relate to rules. In this section we summarize the findings in relation to the research questions. This project was aimed at benefiting practitioners as well as research by investigating how organizational members act in relation to formal rules. Therefore this section is concluded by summarizing our main contributions to industry and research.

The organization creates rules as control measures, but the rules are generic and the situations they are applied to are specific; thus they can not be used for optimal result at all times. We acknowledge that rule breaking may be both positive and negative to an organization. We also acknowledge that an effective employee understands when, to what extent and how to deviate from rules. Such an employee estimates what effect and possible implication a rule breaking action entails and can do a judgement call that benefits the organization. However, all rule breaking do not induce positive effects, even if the intention was positive. Our focus in the study has been the unselfish behaviour when employees act in a way they see as positive for the organization.

How do employees become aware of rule breaking at the workplace?

Our study has shown that people foremost become aware of rule breaking at the workplace by observing others performing such actions. The second most common reason is being told by colleagues or employers to break rules.

Very few of the rule breaking actions that we have studied have been from the initiative of our interviewees. We conclude that this requires experience and information about the rule and the consequences that will transpire when breaking it. This experience is something that newly hired usually does not possess. For newcomers to take initiative is more common if they work close to customers.

How do employees break rules at the workplace?

The cases show that employees break rules in relation to the rule, they do not completely disregard a rule because they observe that it is broken. Employees have a seemingly contradictory perception of rules; they think that rules are good even though they frequently break them. They largely let the norm of their group determine what rules may be broken and to what extent to break them. The norm allow for a certain extent of deviation from the rule.

Why do employees participate in rule breaking at the workplace?

Norms within the teams largely determine whether employees break rules, they are a powerful controlling mechanism. Employees break rules because they are bad or out-dated, but it also occurs that they are very determined to follow rules that are evidently bad. In the cases when employees took the initiative to break rules, they encountered a situation where they felt that the rule created a barrier that hindered them from doing a good job. Employees who work close to customers are more likely to take initiative to break rules. Employees are motivated to break rules by either wanting to save time, or by wanting to satisfy the customer.

Why would a rule remain even though it is frequently broken?

Changing rules is costly for the organization and is encountered with a lot of resistance. The change of broken rules do occur, but only when the organization encounters performance problems. Employees are uncertain on whom to contact to change rules, and are getting used to breaking the rules. Even if rules are broken, they still work as regulating mechanisms. Rules also help newly hired until they have found their own way to handle situations.

6.1 Implications for practitioners

The employees studied in this project were empowered to take initiative and they broke organisational rules without deconstructive intent; they deviated from designated procedures because they found them to be inadequate, out-dated or inapplicable. Of particular interest is that although the employees justified their rule-breaking behaviour, they were not interested in informing the rule-maker of the deviation or suggesting any change to the rule; the rule breaker does not tell the rule-maker that the rule is being broken.

Rule breaking is a kind of feedback which is not brought forward to the rule-maker (Olin Wickenberg 2001), and the consequence is a lack of feedback to the rule-maker, and a gap in the rule maker's knowledge about how rules are being interpreted in practice.

As students gathering data for our master's thesis however, we were able to find out how members of an organisation interpret, abide to or break rules. The procedure did not require hidden cameras, but simply our inability as external to the organisation, to critic the interviewee's actions. Rule breaking is not brought forward to the rule-maker, but to researchers (Olin Wickenberg 2001), and the fact that we were external to the organisation was undoubtedly important.

Thus, while rule breaking makes organisations function when the rules are dysfunctional, the rule breaking also distances the rule receiver from the rule maker. The result is a knowledge gap which we have managed in this study not to bridge, but to explore. Our main contribution to industry is that when employees know that they cannot be critiqued, they are able to provide otherwise hidden feedback about how rules are being interpreted. This ought to be of particular importance during the drastic procedural changes that many large IT organisations performing as they are transitioning to agile practices.

6.2 Implications for researchers

This study has concluded that there is a knowledge gap between rule-makers and rule-receivers which is preferably explored from an academic perspective. Further research could investigate how the knowledge gap can be bridged, and we have also only concluded that rule breaking happens in relation to the rule, not what decides its boundaries. Exploring rule interpretations is highly relevant to the software engineering area given the important social and collaborative dimension of software engineering work.

References

Axelrod, R. (1986) An Evolutionary Approach to Norms. The American Political Science Review, 80(4), pp. 1095-1111.

Bandura, A. (1977) Social Learning Theory. Englewood Cliffs, N.J.: Prentice Hall.

Bass, B. M. (1990) Bass & Stogdills Handbook of Leadership. New York, Free Press.

Baucus, M. S., Norton, W. I., Baucus, D. A., Human, S. E. (2008) Fostering Creativity and Innovation without Encouraging Unethical Behaviour. Journal of Business Ethics, 81(1), pp. 97-115.

Brief, A. P., Motowidlo, S. J. (1986) Prosocial Organizational Behaviours. Academy of Management, 11(4), pp. 710-725.

Brunsson, N. (1989) The organization of hypocrisy; talk, decisions and actions in organizations. Chichester, Wiley.

Manifesto for Agile Software Development (2001) http://www.agilemanifesto.org (2013-12-14).

Buchanan, D., Badham, R. (2008) Power, Politics, and Organizational Change: Winning the Turf Game. London, Sage.

Cockburn, A. (2006) Agile Software Development: The Cooperative Game, second edition. Boston, Pearson Education.

Dahlbom, B., Mathiassen, L. (1993) Computers in Context: The Philosophy and Practice of Systems Design. Cambridge, Blackwell.

Dahling, J. J., Chau, S. L., Mayer, D. M., Gregory, J. B. (2012) Breaking Rules for the Right Reasons? An Investigation of Pro-social Rule Breaking. Journal of Organizational Behaviour, 33(1), pp. 21-42.

DeHart-Davis, L. (2007) The unbureaucratic personality. Public Administration Review, 67(5), pp. 892-903.

Desai, V. M. (2010) Rule Violations and Organizational Search - a Review and Extension. International Journal of Management Reviews, 12(2), pp. 184-200.

Easterbrook, S., Singer, J., Storey, M-A., Damian, D. (2008) Selecting Empirical Methods for Software Engineering Research. Guide to Advanced Empirical Software Engineering. pp. 285-311.

Eisenhardt, K. M. (1989) Building Theories from Case Study Research. The academy of Management Review, 14(4), pp. 532-550.

Eraut, M. (2000) Non-formal learning and tacit knowledge in professional work. British Journal of Educational Psychology, 70(1), pp. 113-136.

Feldman, D. (1984) The Development and Enforcement of Group Norms. The Academy of Management Review, 9(1), pp. 47-53.

Galbraith, J.K. (1979) The new industrial state. Harmondsworth, Pelican Books.

Granér, R. (1994) Personalgruppens psykologi. Lund, Studentlitteratur.

Kahneman, D. (2011) Thinking, Fast and Slow. New York, Farrar, Straus and Giroux.

Kirke, C. (2010) Orders is Orders... aren't they? – Rule Bending and Rule Breaking in the British Army. Ethnography, 11(3), pp. 359-380.

Manz, C. C., Sims, H. P. Jr. (1981) Vicarious Learning: The Influence of Modeling on Organizational Behavior. The Academy of Management Review, 6(1), pp. 105-113.

March, J. G., Schulz, M. and Zhou, X. (2000) The dynamics of rules: change in written organizational codes. Stanford, Stanford University Press.

Mintzberg, H. (1980) Structure in 5's: A synthesis of the research on organization design. Management science, 26(3), pp. 322-341.

Morrison, E. W. (2006) Doing the Job Well: An Investigation of Pro-Social Rule Breaking. Journal of Management, 32(1), pp. 5-28.

Morrison, E. W. (2002) Newcomers' Relationships: The Role of Social Network Ties during Socialization. The Academy of Management Journal, 45(6), pp. 1149-1160.

Nonaka, I. (1994) A Dynamic Theory of Organizational Knowledge Creation. Organization Science, 5(1), pp. 14-37.

Olin, T., Wickenberg, J. (2001) Rule Breaking in New Product Development - Crime or Necessity?. Creativity and Innovation Management, 10(1), pp. 15–25.

Ouchi, W. G. (1980) Markets, Bureaucracies, and Clans. Administrative Science Quarterly, 25(1), pp. 129–141.

Runeson, P., Höst, M. (2009) Guidelines for conducting and reporting case study research in software engineering. Empirical Software Engineering, 14(2), pp. 131-164.

Seaman, C. B. (2008) Qualitative Methods. Guide to Advanced Empirical Software Engineering. Shull F., Singer J., Sjøberg D. I. K. pp. 35-62.

Singer, J., Sim, S. E., Lethbridge, T. C. (2008) Software Engineering Data Collection for Field Studies. Guide to Advanced Empirical Software Engineering. Shull F., Singer J., Sjøberg D. I. K. pp. 9-34.

Spreitzer, G. M., Sonenshein, S. (2004) Towards the Construct Definition of Positive Deviance. The American Behavioral Scientist, 47(6), pp. 828-847.

Verkuyten, M. (1994) Rules for Breaking Formal Rules: Social Representations and Everyday Rule-governed Behaviour. Journal of Psychology, 128(5), pp. 485-497.

Warren, D. (2003) Constructive and destructive deviance in organizations. Academy of Management Review, 28(4), pp. 622–632.

Yin, R. K. (2004) Case study research: design and methods - Third Edition. Thousand Oaks, Sage.