The role of feedback in mono- and multicultural agile teams: Effect on job performance and relations to arousal levels

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ABSTRACT,

The business environment is continually changing and evolving. The agile way of working is one of the responses to the need for increased adaptability. At the same time, organizations are becoming more culturally diverse, and different cultural assumptions may create cultural clashes that are particularly evident in moments of evaluation. This thesis aims to examine the role of feedback in mono- and multicultural agile teams, its effect on job performance, and its relationship to arousal levels. 80 team members from 10 agile teams were part of the conducted mixed-method design. All verbal behaviors that were coded as giving feedback and considered initiating moments of evaluation in the retrospective meeting of the teams were categorized by the feedback characteristics type of feedback, feedback level, feedback valence, and feedback source through an inductive approach. In the evaluation moments, verbal behaviors and arousal level peaks of the feedback giver and feedback receiver(s) were measured. Furthermore, the effect of giving feedback on job performance was analyzed through correlation analysis. Findings show that multicultural teams experience a higher amount of arousal peaks in moments of evaluation. In both mono- and multicultural teams a decrease in arousal peaks is particularly evident when giving subjective feedback. Moreover, multicultural teams have a higher frequency of the verbal behaviors interrupting and defending one's own position in moments of evaluation. Lastly, findings show that giving both negative and positive feedback has a negative effect on job performance. This is in line with the higher frequency of giving feedback and lower average job performance in monocultural teams compared to multicultural teams. This study indicates that arousal levels provide reason to expand existing literature regarding the evaluating scale of Meyer's framework. Additionally, this thesis contributes to the conflicting results among scholars on the relationship between feedback and job performance through an innovative way feedback was measured, and it provides managers guidance on how feedback should be used as it may affect job performance. Lastly, the implications of arousal levels and the corresponding emotions can be used by managers when giving feedback.

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Keywords

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1. INTRODUCTION

Today's business environment is continually changing and evolving (Keršienė & Savanevičienė, 2005). In order for organizations to stay innovative and successful in this environment, they need to adapt quickly to new developments and unexpected changes. One of the responses to the need of increased adaptability is the agile way of working and its focus on teams (Grass et al., 2020). Agile methods are increasing in popularity and, despite finding their origin in software development (Kupiainen et al., 2014), agile project management is currently being used in all kinds of areas in the business environment (Gustavsson, 2016).

The principles of agile software development, which form the generic nature of all kinds of agile methodologies, are stated in the agile manifesto (Misra et al., 2012). These principles are the basis that creates the values agile teams hold which are: Individuals and interactions over processes and tools; Working software over comprehensive documentation; Customer collaboration over contract negotiation; and Responding to change over following a plan (Fowler & Highsmith, 2001).

One of the aspects of a continually changing and evolving business environment is globalization. Globalization makes it that most countries nowadays include different ethnic cultures (Tung, 2008). This occurrence is visible in organizations, as they become more culturally diverse. As a result, teams may be characterized by being both multicultural as well as monocultural. Especially in multicultural teams, different cultural assumptions may create cultural clashes and divergent processes (Davison & Ekelund, 2004). These clashes may be particularly evident in moments of evaluation (Meyer, 2014).

Indeed, one of the areas of the eight-dimension model developed by Meyer (2014) to show how cultures vary along a spectrum is Evaluating: direct negative feedback vs. indirect negative feedback. For instance, Kung et al. (2016) found that the regulatory focus of Asian and North Americans differed and led to a different perspective on receiving negative feedback. The framing of negative feedback leads to significant differences in the motivation of the receiver, depending on their cultural background. Giving feedback and receiving feedback can thus have different implications in a multicultural setting as opposed to a monocultural setting.

The process of giving feedback can be defined as a verbal task-oriented behavior (Hoogeboom et al, 2021). The main objective of task-oriented behavior is the improvement of reliability and efficiency within a team (Yukl et al., 2019).

As feedback is perceived differently across cultures, and the framing of the feedback has a significant impact on the motivation of the receiver (Kung et al., 2016), looking at the arousal levels in moments of evaluation can lead to a greater understanding of the perception of feedback among different cultures. Arousal levels can be measured by electrodermal activity. This is done by measuring responses in the eccrine sweat glands. Skin conductance responses are highly sensitive to changes in emotion and attention (Akinola, 2010). It is proven to be sensitive to disclosing emotions, as well as revealing emotions prior to consciously being aware of the emotion (Akinola, 2010).

Since moments of evaluations can impact individuals' behaviors, the relationship between feedback and job performance is important to explore (e.g., De Nisi & Kluger, 2000; Kuvaas, 2011; Heslin, 2004). However, there is disagreement and inconsistency among scholars about the effects of this relationship. For instance, De Nisi and Kluger (2000) concluded that giving feedback improves job performance in general, but in one-third of the cases, it had a negative effect, thus making the widely accepted perspective that feedback primarily has positive effects questionable. Feedback has been measured in these papers through surveys (Kuvaas, 2011; Heslin, 2004), which are, however, very subjective. Hence, this thesis uses an innovative way through video-coded behaviors to measure feedback.

Therefore, in order to research the relationships between arousal levels in moments of giving feedback in agile teams and the effect that giving feedback has on job performance in agile teams, taking into account the cultural diversity of the teams, the following research questions have been developed:

How do arousal levels manifest and differ in moments of evaluation in multicultural and mono-cultural agile teams?

How do moments of giving feedback affect job performance in multicultural and mono-cultural agile teams?

By answering the research questions, several new theoretical and practical insights could be suggested. In terms of theoretical contributions, this thesis extends knowledge in two ways. Firstly, it adds to the literature by exploring the relationship between arousal levels and moments of giving feedback. This sheds light on the role feedback may have on the physiological state of individuals in both multicultural and monocultural agile teams. Physical responses are rarely examined during moments of evaluation. Secondly, it contributes to the literature on verbal behaviors by using an innovative way of assessing feedback. As the literature is divided on the relationship between feedback and job performance.

In terms of practical contributions, the relationship between arousal levels and moments of giving feedback may shed some light on the importance of providing feedback and how it may have different consequences based on the cultural diversity of a team. This could help managers in determining how to deliver feedback. Another practical implication is how job performance could be potentially improved by looking at the effect of positive and negative feedback on team members' behaviours. For instance, managers could adapt their way of providing feedback depending on the cultural diversity of the team.

Firstly, this report will consist of an overview of the existing literature in the relevant domains. Followed by the theoretical framework there is the methodology followed by the results. After providing the results, the theoretical and practical implications are provided. Concluding, the strengths, limitations, and recommendations for future research are discussed.

2. THEORETICAL FRAMEWORK

2.1 Agile teams

Self-organizing Agile teams are composed of "individuals that manage their own workload, shift work among themselves based on need and best fit and participate in team decision making." (Hoda et al., 2013, p. 1). The implementation of self-managing teams has benefits such as increased productivity, better quality work and improved quality of work-life for employees, decreased turnover, and decreased absenteeism. On the other hand, self-managing teams weaken the influence of authority, out-of-team, and increase uncertainty (Tiejun et al., 2013). Erickson et al. (2005) describe that agility means stripping away as much of the heaviness, commonly associated with the traditional software-development methodologies, as possible to promote quick response to changing environments, changes in user requirements, accelerated project deadlines, and the like.

Agile teams are meant to be democratic teams —where all members are considered peers at the same level, without a strict hierarchy in practice. Team members are empowered with collective decision-making and cross-functional skills, which increases their ability to self-organize. Management in Agile

teams is meant to be more facilitative and coordinating (Hoda et al., 2013).

2.2 Multicultural teams

Because of increased immigration and globalization, most countries include multiple ethnic cultures (Tung, 2007) and organizations may thus become more culturally diverse and be characterized by multicultural teams. Multicultural teams are defined as task-oriented groups consisting of people of different nationalities and cultures (Marquardt and Horvath, 2001). Cultural diversity tends to increase divergent processes. This means that more values and ideas from different cultural perspectives get added to the team. (Davison & Ekelund, 2004).

In one of the most important and recent cultural models, Meyer (2014) describes eight dimensions. Among these dimensions, cultures can vary on the spectrum of evaluation, whereas on the one side of the spectrum direct negative feedback stands, and on the other side indirect negative feedback. In countries that are more leaning toward direct negative feedback, the feedback is provided frankly bluntly, and honestly. These messages are not softened by positive ones. On the other hand, countries that prefer indirect negative feedback, will provide the feedback softly, subtly, and diplomatically. Therefore, cultural differences are present in moments of evaluations and feedback.

2.3 Feedback

Feedback in a team setting can be defined as the transmission of information to team members or to the team as a whole about actions, events, processes, or behaviors relative to the completion of tasks or teamwork. (London & Sessa, 2006). There are multiple functions that giving and receiving feedback possess. For instance, it can help to set or adjust to new goals, guide action, highlight the outcomes or processes of team activity, and stimulate critical reflection on the tasks and situations to produce novel insights and approaches (Bartram & Roe, 2008). Hence, feedback serves a critical role in detecting errors that can act as a trigger for problem identification and support strategy development (Gabelica & Popov, 2020).

For feedback to play a critical and constructive role, several factors are fundamental. Feedback effectiveness depends, indeed, on the quality of the feedback, on team or individual situations, on processing and perception of feedback (Gabelica & Popov, 2020). High-quality feedback is specific, is consistent across time, and provides information on the specific goal-related behaviors and processes that result in performance outcomes (Steelman & Rutkowski, 2004). If the feedback is perceived as high quality, the feedback effectiveness is increased. In certain team or individual situations, the effectiveness of feedback will also increase (Bailey & Thompson, 2000). If a team for example perceives themselves as high performing, the feedback effectiveness is higher. Feedback is only useful when the receiver finds the feedback to be relevant, useful, and meaningful. (Gabelica et al., 2012). If this is not the case feedback is often rejected, thus being ineffective.

There are four core feedback characteristics that influence feedback effectiveness (London & Sessa, 2006). These characteristics are type of feedback, feedback level, feedback valence, and its source. Feedback type can describe processes or performances. Process feedback concerns with providing information regarding the way a person performed a task and if the expected result was achieved or not. Performance feedback gives information about a team or individual their performance in order to reinforce good performance and repair poor performance by identifying areas of improvement (Gabelica & Popov, 2020). The feedback level indicates whether feedback targets an individual, a team, or both. Team feedback is both used to address individuals in a team setting as well as the team as a whole. Feedback valence indicates whether a performance is evaluated as positive or negative. The source and how feedback is perceived is the last characteristic. The source of feedback can be subjective, for instance an opinion. The source of feedback can also be objective, for example feedback based on a performance indicator (Gabelica & Popov, 2020). Subjective feedback sources can be either from outside of the team or from inside of the team.

The process of giving feedback can be defined as a verbal task-oriented behavior (Hoogeboom et al., 2021). Task-oriented verbal behaviors have four component behaviors. One of these components is the monitoring of performance and operations (Yukl et al., 2019). Through moments of evaluations, the primary purpose of task-oriented behaviors to improve efficiency and reliability of a team is worked towards (Yukl et al., 2019). Similar to Hoogeboom et al. (2021), in this thesis, the Verbal Behaviors Codebook (Wilderom, 2021) is used. This makes it possible to identify moments of evaluation, as the moments of giving feedback are coded, as well as the potential responses to feedback. The coded behaviors derived from the coding scheme that are considered in this thesis are visible in Table 1 (see Appendix A).

In cases of giving feedback for developmental purposes, it may also result in negative reactions such as anger and make individuals unwilling to change their behavior (Steelman & Rutkowski, 2004). It may also be viewed as an evaluative threat to the self, which causes withdrawal from assigned tasks in the face of setbacks to protect one's ego (Cianci et al., 2010). Hence, it is important to explore how the reaction to moments of evaluation and feedback can impact the emotional state and alertness of team members during meetings.

2.4 Feedback and Arousal Levels

To explore this impact, skin conductance responses play a paramount role since they are highly sensitive to changes in emotions, alertness, and attention. It has been proven that skin conductance levels can change when showcasing emotions (Akinola, 2010).

Western countries experience high arousal emotions more than low arousal emotions, whereas eastern countries experience low arousal emotions more often than high arousal emotions (Lim, 2016). Russell (1980) states that high arousal emotions are, for instance, being afraid, alarmed, angry, annoyed, aroused, astonished, delighted, distressed, excited, frustrated, glad, happy, and tense. Low arousal emotions are, on the contrary, feeling at ease, bored, calm, contented, depressed, droopy, gloomy, miserable, pleased, relaxed, sad, satisfied, serene, sleepy, and tired. Lim argues that the primary reason for the difference in arousal emotions between western and eastern countries arises from the emotional state that is perceived as ideal in cultures. As westerners value high arousal emotions more than easterners, activities that result in high arousal emotions are promoted more (Lim, 2016).

2.5 Feedback and Job Performance

As feedback valence is one of the characteristics that influence feedback effectiveness, it has been shown to affect job performance. Negative feedback could also have potential benefits. The team regulatory theory (DeShon et al., 2004) showcases that negative feedback is given in situations where desired results were not achieved, and additional effort is needed.

However, numerous researchers have found that the opposite is true, thus indicating that negative feedback has a negative impact on job performance (Guo et al., 2017). It can for instance indicate that an employee is incompetent (Zhou, 1998). Additionally, it has been shown that negative feedback may undermine employees' intrinsic information. (George & Zhou, 2001), and it tends to have a deleterious effect on subsequent performance (Van Dijk & Kluger, 2010).

De Nisi and Kluger (2000) performed a meta-analysis of empirical studies on performance, which indicated that there is a modest positive effect of feedback on overall performance. Job performance should be considered as a multidimensional concept. It can be defined as the total expected value to an organization of the discrete behavioral episodes that an individual carries out over a standard period of time. This thus indicates that job performance is a property of behavior (Motowidlo & Kell, 2003). The behavioral aspect of job performance refers to the actions that people do while at work. (Campbell, 1990). Although there is a relationship between the behavioral aspect and the expected value on job performance, there is not a complete overlap. The expected value is also influenced by other determinants. There can be made a distinguishment in performance between effectiveness and productivity (Campbell et al., 1993). Effectiveness refers to the evaluations of the results of the performance, whereas productivity is the ratio of effectiveness compared to the cost of attaining the outcome (Sonnentag & Frese, 2002).

However, over one-third of the cases indicated that giving feedback hurt performance. As a result, De Nisi and Kluger concluded that feedback usually positively affects performance, but not always, thus challenging the widely accepted perspective introduced by Ammons (1956) which emphasized the positive aspects of feedback. Additionally, Kuvaas (2011) found that the relationship between the perceived helpfulness of feedback on work performance was weak. Employees that however perceived that they received high levels of regular feedback did show a positive relationship between feedback and work performance. This indicates that feedback only positively affects job performance if the feedback is perceived as high-level feedback, and regular feedback does not influence job performance.

Contradictory, Heslin and Latham (2004) showcases that there is a positive relationship between interpreting feedback and job performance, and specifically self-efficacy. However, there is a clear distinction between high performers and low performers. Whereas high performers will continue to increase their performance over time by interpreting feedback effectively, low performers will inefficiently interpret feedback. Both the level of feedback and the level of performance are thus important factors affecting the relationship between feedback and job performance. As opposed to previous papers, this thesis explores feedback in an innovative way through verbal behaviors instead of surveys.

3. METHODOLOGY

3.1 Research design

In this research, a mixed-method approach was used. A qualitative approach is used to answer the first research question. This is due to the exploratory nature of the research, as arousal levels are a novelty in this area. A quantitative approach was used to answer the second research question: the dataset contains coded verbal behaviors and a survey measurement of job performance. By implementing a mixed-method approach, the different approaches are complementary (Sounders, 2009), which makes it possible to deal with both the inductive, explorative nature of this research, as well as the more deductive and testing nature of this study.

3.2 Data collection

This research uses data that was collected from a large service institution in The Netherlands that adopted the agile way of working throughout its organization. This data was collected by the department of Organizational Behaviour, Change Management & Consultancy (OBCC) of the University of Twente, during 2020-2021. A variety of data was collected. The data includes video recordings of meetings, self-rated surveys, arousal data of the meeting participants, and meeting transcripts.

3.3 Sample

The data consists of 10 video recordings of meetings from 10 agile teams, composed of 80 team members in total. These meetings were the retrospective meetings, which consists of agile teams sharing their review and feedback (Sillitti et al., 2011). As this thesis is mainly concerned with the verbal behavior of *giving feedback*, the focus was put on the retrospective meetings. The video recordings vary in length and are on average around one hour. Each participant wore a BIOPAC bracelet during the meeting, which makes it possible to measure the arousal levels on an individual basis. In order to conduct the coding of the video meetings, Observer XT was used.

Multicultural teams are composed of members from diverse cultural backgrounds (Groves & Feyerherm, 2011). For this research, teams consisting of 1 or more members from another background than Dutch are considered multicultural teams. Additionally, multicultural teams held their meetings in English. Teams consisting of exclusively Dutch members were considered to be monocultural. In the sample, there are six multicultural and four monocultural teams.

3.4 Research instruments / Measures

3.4.1 Verbal behaviors for Feedback type

Feedback can be categorized into positive and negative feedback. Derived from the OBCC coding scheme (Wilderom, 2021), there were two verbal behaviors selected. These verbal behaviors were *giving positive feedback* and *giving negative feedback*. There was made a distinction between *giving negative feedback – constructive / friendly* and *giving negative feedback destructive / hostile*, as seen in Table 1. Using Observer XT the moments of these behaviors were coded. During the time that a person was giving feedback and the interaction following this behavior, the behavior of the receiver(s) is also taken into account in order to investigate the arousal levels of both the feedback giver as well as the feedback receiver(s). In almost all cases the feedback receiver was *active listening* during the feedback giving stage. Additionally, the verbal behavior of the feedback receiver on the feedback is also taken into consideration, as this might have an impact on the arousal levels of both the feedback giver as well as the receiver. Some of the possible responses to feedback according to the verbal codebook are *defending one's own position*, *agreeing*, *disagreeing*, *verifying* and *informing with facts* (as seen in Table 1).

A person whom feedback is being given to is considered the receiver of feedback. The response of this person is considered as responding to feedback if the behavior is recorded within 5 seconds of the feedback giver's behavior and is related to the given feedback. In case that the feedback receiver does not respond with a different behavior within this time period, it was given the behavior *Active listening – responding to feedback*. *Receiving feedback* and *responding to feedback* were thus also linked to the arousal levels. Additionally, *giving feedback* is categorized based on the feedback characteristics type of feedback, feedback level, feedback valence and feedback source. This results in the categories shown in Table 2.

Table 2
Feedback characteristics categories.

Type of feedback	Feedback level	Feedback valence	Feedback source
Process	Individual	Positive	Subjective
Performance	Team	Negative	Objective

The type of feedback could be either *process feedback* or *performance feedback*. *Process feedback* concerns with providing information regarding the way a person or team performed a task and if the expected result was achieved or not. An example of *process feedback* can be found in the transcript excerpt from team A (see Appendix C). F10 identified a problem with how through the use of different sources, information did not always match each other, which through the way the team used the different sources, the expected result was not achieved as F2 points out. *Performance feedback* gives information about an individual or team their performance to repair poor performance or reinforce good performance. An example of this is visible in a moment of evaluation of team J (see Appendix C). F1 points out that the team is on the right track and in full alignment with the desired performance, while simultaneously reinforcing good performance by providing a possible way how the good performance can be maintained.

The feedback level was either on an individual level or on a team level. *Individual feedback* was aimed at a single person. This is visible in team H (see Appendix C). F1 was giving feedback specifically to F7. Through the use of 'you', this becomes evident. *Team feedback* was aimed at the team. In team J (see Appendix C) this was given. F1 was giving feedback to the whole team in this instance. This becomes clear as 'we' was used to address the feedback receivers.

The *feedback valence* indicates whether the given feedback was negative or positive. This was done based on the verbal behaviors that identified giving feedback moments. Thus, the verbal behaviors *Giving negative feedback constructive / friendly* and *Giving negative feedback destructive / hostile* indicated *negative feedback valence*, and *giving positive feedback* indicated *positive feedback valence.*

The *feedback source* was either subjective or objective. *Subjective feedback* means that the feedback consisted of a personal opinion or feeling. An evaluation moment where this feedback characteristic becomes evident is seen in team H (see Appendix C). F1 expressed the personal feelings of F1. That became particularly clear as F7 asked if that is how F1 felt after F1 gave feedback, and F1 responded with: "yeah, I feel yeah that I get like massively annoyed.". *Objective feedback* means that the feedback was not influenced by personal feelings or opinions, but for example based on facts or KPI's. An example of this is visible in team A (see Appendix C). The given feedback by F10 is based on facts. F10 indicates that the information does not always match due to the use of different sources. As this is a factual statement, this evaluation moment was given the feedback characteristic *objective feedback.*

3.4.2 Job performance

Gibson et al. (2009) developed a team performance scale. This scale has been altered to measure job performance. On a Likert scale from 1-7 all participants in the meetings self-rated themselves by the following questions:

1. This employee is effective
2. This employee makes few mistakes
3. This employee does high quality of work
4. This employee consistently performs at a high level

This way, job performance is measured by self-assessment. The Cronbach's Alpha of the survey items was .806, which is an acceptable reliability score (Tavakol & Dennick, 2011).

3.4.3 Arousal levels

The arousal level of all participants was collected with the BIOPAC bracelets that every person wore during the retrospective meeting. After coding all verbal behaviors by using Observer XT, it was possible to see for every person what their arousal level peaks were in moments of evaluation. Acqknowledge software identified peak skin conductance responses, which refers to a change in the skin conductance level that may occur in response to a stimulus. Thus, the software automatically identified peak changes in the skin conductance level. The arousal data was matched with the observational data, using Acqknowledge software. By using the software, it was possible to look into the count of arousal level peaks in moments of evaluation.

3.5 Data analysis

3.5.1 Qualitative analysis

As a more qualitative approach is used for the first research question, a content analysis and a thematic analysis were performed. More specifically, content analysis was done with a frequency count, of the type of feedback and the cultural diversity of teams and matched with the observed arousal levels. The identified feedback behaviors were then interpreted by the researcher through inductive thematic analysis (Braun & Clarke, 2006). This method made it possible to gain an insight into the meaning of patterns within the data set by making sense of shared meanings and experiences (Braun & Clarke, 2012). The behaviors of the feedback receiver were also considered, as the verbal behaviors of receiving and responding to feedback were also interpreted through thematic analysis. This way, it is possible to identify and analyze "moments of evaluation" through an inductive approach. These additional behaviors as seen in Table 2 are only present in moments of evaluation. Lastly, the identified episodes of evaluations were associated with the arousal data to explore the alertness of team members during those evaluating moments. This was done by first identifying moments of evaluation, where every *giving feedback* behavior was evaluated based on the criteria *feedback receptiveness* and *feedback quality*. If the *giving feedback* behavior met these criteria, a moment of evaluation was started. This evaluation moment ended when the conversation shifted toward a different topic. Then it was decided which person was the feedback giver and which person(s) were the feedback receiver(s). All verbal behaviors of the feedback giver and receiver(s) that occurred in an evaluation moment were counted, as well as the arousal peaks. In order to take into account the varying length of moments of evaluations, as well as the varying amount of persons involved in moments of evaluations, the arousal peaks were standardized. This was done by dividing the total amount of arousal peaks in an evaluation moment of the involved persons by the length of that specific evaluation moment and the number of persons involved. This way, a comparison between different evaluation moments could be made. Additionally, the standardized arousal levels were grouped by the feedback characteristics of the *giving feedback* behavior that started the moment of evaluation and the cultural diversity of the team.

3.5.2 Quantitative analysis

The second research question was approached through a quantitative analysis. This was done through correlation analysis,

as this does not influence the measures of the variables, thus offering a natural view of the results (Field, 2018). Through correlational analysis, the correlation between feedback and job performance was assessed. As the meetings vary in length, the verbal behaviors were standardized. This was done by dividing the sum of that specific verbal behavior by the total sum of verbal behaviors that occurred in a meeting. This way, the behaviors were not impacted by the varying length of the meetings. A Shapiro-Wilk test indicated that job performance was normally distributed in both mono- and multicultural teams. An independent samples t-test was conducted to underline the difference in means between these groups. The verbal behaviors *Giving negative feedback* and *Giving positive feedback* both deviated from a normal distribution as a Shapiro-Wilk test indicated. In order to determine if there was a difference in means for both verbal behaviors between mono- and multicultural teams, a Mann-Whitney U Test was conducted. The outcome of this test indicated that for both verbal behaviors there was a significant difference in means between mono- and multicultural teams. As the variables *giving negative feedback* and *giving positive feedback* were not normally distributed, a Spearman's Rho correlation was used to determine the effect of giving feedback on job performance. The correlation strength was interpreted through the r values of the correlation, with an r value ranging between -0.3 and -0.6 indicating a moderate correlation strength (Akoglu, 2018).

4. RESULTS

4.1. Feedback type

The sample included a total of 316 behaviors of *giving negative* and *positive feedback*. As shown in Table 3, there were 119 instances of *giving negative feedback* and 197 instances of *giving positive feedback.* 39 instances of *giving negative feedback* were in multicultural teams, and 80 instances were in monocultural teams. *Giving positive feedback* occurred 53 times in multicultural teams and 144 times in monocultural teams.

Table 3
Sum of giving feedback per mono- and multicultural teams.

Verbal behavior	Multicultural teams	Monocultural teams	Total
Giving negative feedback	39	80	119
Giving positive feedback	53	144	197
Total	92	224	316

4.2 Feedback characteristics

As seen in Table 3, the majority of feedback behaviors were in monocultural teams. Through inductive coding provided by the researcher, all of these verbal behaviors were given feedback characteristics as described in 3.4.1. Table 4 shows the feedback characteristics of mono- and multicultural teams.

The percentages under mono- and multicultural teams represent the frequency count of a feedback sub-characteristic divided by the total frequency of that feedback characteristic within the cultural diversity group. As a result, within the cultural diversity groups the feedback characteristics all equal 100%. As there was a noticeable difference in the sum of the verbal behaviors giving feedback between mono- (224) and multicultural (92) teams (see Table 3), a frequency count within these groups provided a better comparison of the feedback characteristics based on the cultural diversity of the teams, compared to a sum of the characteristics. This is due to the varying length of the meetings and as there were more multicultural teams (6) than monocultural teams (4).

Table 4
Frequency of feedback characteristics.

Feedback characteristics	**Monocultural teams**	**Multicultural teams**
Feedback type		
Process	82.73%	92.22%
Performance	17.27%	7.78%
Feedback valence		
Positive	63.18%	57.78%
Negative	36.82%	42.22%
Feedback level		
Individual	36.36%	41.11%
Team	63.64%	58.89%
Feedback source		
Objective	11.82%	24.44%
Subjective	88.18%	75.56%

As seen in Table 4, monocultural teams experienced a noticeable lower amount of *process* feedback (82.73%) compared to multicultural teams (92.22%). This indicates that multicultural teams receive relatively more feedback that consists of providing information regarding the way a person or team performed a task and whether the expected result was met. The feedback valence of multicultural teams consists of less positive (57.78%) and more negative (42.22%) feedback compared to monocultural teams (63.18% and 36.82%). Both groups however received *positive feedback* as a majority. There is also about a 5% point difference in the feedback level between multi- and monocultural teams. Monocultural teams received a higher amount of *team feedback* (63.64%) and a lower amount of *individual feedback* (36.36%) compared to multicultural teams.

A noticeable difference is seen in the feedback source between the cultural diversity groups. *Objective feedback* was received relatively more than twice in multicultural teams (24.44%) compared to monocultural teams (11.82%). This indicated that the feedback source in multicultural teams was more often based on an objective source such as a performance indicator compared to monocultural teams.

Additionally, within the cultural diversity groups there were also differences noticeable between teams in feedback characteristics. For instance, as seen in Appendix B Table 10 and 11, Team A (monocultural) experiences significantly more *performance feedback* (30.14%) than team D (monocultural) does (2.56%). Another noticeable difference is that team I (multicultural) has a higher amount of *objective feedback* than team G (multicultural) (7.14%).

4.3 Moments of evaluation

4.3.1 Thematic analysis

Whenever the verbal behavior of giving feedback occurred, through thematic analysis it was considered whether this triggered the start of a moment of evaluation. The decision if a moment of *giving feedback* started a moment of evaluation was based on two criteria.

1. *Feedback receptiveness:* The behavior of giving feedback needed to result in a response from the

feedback receiver(s). Note: This also includes *active listening* as a response.

2. *Feedback quality:* The behavior of giving feedback needs to minimally include information about the feedback to the feedback receiver(s).

These criteria prevented that feedback that was aimed at a person outside of the team or not present in the meeting to not be included. This way, persons whose verbal behaviors were not coded were excluded. Similarly, feedback that consisted of merely a small comment such as 'good', 'clear', and 'in the pocket' that have been coded as giving feedback were not counted as a moment of evaluation. A moment of evaluation thus started when the verbal behavior of giving feedback met these criteria. This moment lasted until the team members shifted towards a different topic, or to another moment of evaluation. Within this starting and stopping time, the verbal coded behaviors of the team members were counted.

In total, there were 64 moments of evaluation. 41 evaluation moments happened in monocultural teams, and 23 moments of evaluation were in multicultural teams. These moments of evaluation in total consisted of 105 behaviors of *giving feedback*, out of the initial 316. There were more instances of behaviors of *giving feedback* due to several moments of evaluation consisting of multiple counts of this behavior. Thus, 33.22% of the coded *giving feedback* behaviors started or were a part of moments of evaluations.

4.3.2 Feedback characteristics in moments of evaluation

For moments of evaluations, a similar table showing the feedback characteristics of mono- and multicultural teams was created, including only the *giving feedback* behaviors of those that are in moments of evaluations, as seen in Table 5.

Table 5
Frequency of feedback characteristics in moments of evaluation.

Feedback characteristics	**Monocultural teams**	**Multicultural teams**
Feedback type		
Process	77.46%	85.29%
Performance	22.54%	14.71%
Feedback valence		
Positive	42.25%	35.29%
Negative	57.75%	64.71%
Feedback level		
Individual	25.35%	29.41%
Team	74.65%	70.59%
Feedback source		
Objective	19.72%	47.06%
Subjective	80.28%	52.94%

There was an increase in *performance feedback* for both cultural diversity categories (22.54% and 14.71% compared to 17.27% and 7.78%). Despite the frequency of *performance feedback* in multicultural teams relatively doubling, monocultural teams still consisted of more *performance feedback*. A similar change is visible in the feedback level. *Team feedback* increased in both multi- and monocultural teams (74.65% and 70.59% compared to 63.64% and 58.89%).

A noticeable shift has occurred in the feedback valence. Moments of evaluations tend to include more *negative feedback* than giving feedback behaviors (57.75% and 64.71% compared to 36.82% and 42.22%). Similarly, *objective feedback* seems to be noticeably more present in moments of evaluations, with both groups almost doubling in frequency (19.72% and 47.06% compared to 11.82% and 24.44%).

The differences between monocultural and multicultural teams based on the feedback characteristics were almost unchanged in moments of evaluations, and they tended to change in the same direction (e.g., a similar decrease in *positive feedback* and an increase in *objective feedback*). The results of Table 5 are thus similar to those of Table 4, looking at the differences between cultural diversity. There are however noticeable group-independent shifts of the feedback characteristics present (e.g., an overall increase in *objective feedback*).

4.3.3 Verbal behaviors in moments of evaluation

The verbal behaviors that occurred in moments of evaluations are shown in Table 6.

Table 6
Frequency of verbal behaviors in moments of evaluation.

Verbal behaviors	**Monocultural teams**	**Multicultural teams**
Active listening	45.70%	35.80%
Informing with facts	14.63%	9.26%
Own opinion	12.07%	12.65%
Agreeing	8.78%	9.26%
Verifying	6.40%	4.63%
Interrupting	3.47%	9.26%
Humor	1.65%	4.63%
Defending one's own position	1.83%	4.63%
Disagreeing	1.65%	1.54%
Stimulating teamwork	1.10%	1.23%
Shaping the discussion	0.73%	1.23%
Showing disinterest	0.55%	0.93%
Asking for ideas	0.00%	1.85%
Null behavior	0.55%	0.31%
Long term	0.55%	0.31%
Correcting	0.18%	0.62%
Delegating	0.00%	0.93%
Sharing personal information	0.18%	0.31%
Showing personal interest	0.00%	0.62%

The percentages shown in Table 6 represent the frequency of a verbal behavior divided by the total frequency of verbal behaviors within moments of evaluations, separated by the cultural diversity group. The behaviors of *giving feedback* have been excluded from this table and from the total frequency count.

In both groups *active listening* occurred most often. There was however a 10% point gap between monocultural and multicultural teams (45.70% compared to 35.80%). Furthermore,

informing with facts has a higher frequency in monocultural teams (14.63% compared to 9.26%). The verbal behaviors *interrupting* and *Defending one's own position* both tended to happen more in multicultural teams as opposed to monocultural teams (9.26% and 4.63% compared to 3.47% and 1.83%).

4.3.4 Arousal levels

Within the moments of evaluations, higher arousal levels has been measured in 37 instances. 20 of these evaluation moments were from monocultural teams, and 17 were from multicultural teams. 3 teams (1 monocultural and 2 multicultural) were excluded from this measurement, due to technical issues. In the 37 instances where arousal peaks have been measured, the total amount of peaks was 1667. The average moment of evaluation had a time span of 64 seconds, with the shortest timespan being 8 seconds and the longest 281 seconds. In order to compare the arousal peaks between mono- and multicultural teams, the total amount of peaks within a moment of evaluation has been divided by the total amount of seconds of the evaluation moment and the total amount of team members involved in this moment of evaluation. The total team members in a moment of evaluation that were involved was decided on the feedback characteristic feedback level. If a moment of evaluation was *team feedback*, then all team members were considered part of the evaluation moment, thus all team members' arousal peaks were measured and they were all included in the total amount of team members involved. If a moment of evaluation was based on *individual feedback*, only the arousal levels of the feedback giver and feedback receiver were measured, as well as only those were considered to be a part of the evaluation moment. The arousal peaks measured thus depended on which team members were part of the evaluation moment.

By dividing the amount of arousal peaks in a moment of evaluation by the duration in seconds and the amount of team members involved, the average sum of arousal peaks per second per involved team member was 0.122 in monocultural teams, and 0.136 in multicultural teams. This means that arousal peaks occurred more frequently per second per involved team member in multicultural teams than in monocultural teams. There were thus relatively slightly more arousal peaks in multicultural teams.

The arousal peaks were categorized by the feedback characteristics and cultural diversity in Table 7.

Table 7
Arousal level peaks (per second per involved team member).

Feedback characteristics	**Monocultural teams**	**Multicultural teams**
Feedback type		
Process	0.122	0.124
Performance	0.126	0.193
Feedback valence		
Positive	0.131	0.165
Negative	0.116	0.125
Feedback level		
Individual	0.098	0.126
Team	0.134	0.139
Feedback source		
Objective	0.142	0.155
Subjective	0.115	0.124

Performance feedback increased the arousal peak occurrences in both mono- and multicultural teams. The effect of *performance feedback* on arousal peaks was however considerably stronger in multicultural teams compared to monocultural teams (0.193 compared to 0.126). The *feedback valence* had a noticeable effect on the arousal peaks in both mono- and multicultural teams. *Positive feedback* caused a higher occurrence in peaks (0.131 and 0.165), whereas *negative feedback* caused a lower occurrence in peaks (0.116 and 0.125). Within multicultural teams, the effect of *positive feedback* on arousal levels was stronger than in monocultural teams. The feedback level had an effect on both groups, however, the effect on arousal peaks was greater in monocultural teams, as *individual feedback* caused the peak occurrence to drop to 0.098. The *feedback source* had a similar effect on the arousal peak occurrence in both mono- and multicultural teams. *Objective feedback* caused higher peak occurrences (0.155 and 0.142), whereas *subjective feedback* caused lower arousal peak occurrences (0.124 and 0.115).

4.4 Job performance and Feedback

Self-rated job performance in monocultural teams had a mean of 4.73 (with SD = 0.68), whereas job performance in multicultural teams has a mean of 5.55 (with SD = 0.79). As shown in Table 8, the mean job performance of team I had the highest average job performance (6), and team C had the lowest average job performance (4.4)

Table 8
Mean job performance.

Team	**Job Performance**
Team A (monocultural)	4.9
Team B (monocultural)	5
Team C (monocultural)	4.4
Team D (monocultural)	4.6
Team E (multicultural)	5.6
Team F (multicultural)	5.3
Team G (multicultural)	5.6
Team H (multicultural)	5.3
Team I (multicultural)	6
Team J (multicultural)	5.6

The Shapiro-Wilk test indicated that job performance in both monocultural ($W(24) = 0.960$, $p = 0.430$) as well as multicultural teams ($W(41) = 0.972$, $p = 0.393$) is normally distributed. An independent samples t-test underlined this difference in means, as it showed a significant difference between mono- and multicultural teams with $t(63) = -4.225$, $p = < 0.001$.

The mean of the standardized frequency verbal behavior *giving negative feedback* was 0.000889 (with SD = 0.00103) in monocultural teams, and a mean of 0.000521 (with SD = 0.001652) in multicultural teams. The Shapiro-Wilk test indicated that *negative feedback* is not normally distributed, for both monocultural ($W(24) = 0.769$, $p = < 0.001$) and multicultural ($W(41) = 0.341$, $p = < 0.001$) teams.

The mean of the standardized frequency verbal behavior *Giving positive feedback* was 0.001524 (with SD = 0.001271) in monocultural teams, and 0.000714 (with SD = 0.0017946) in multicultural teams. The Shapiro-Wilk test gave as result that monocultural teams ($W(24) = 0.884$, $p = 0.01$) as well as multicultural teams ($W(41) = 0.387$, $p = < 0.001$) were not normally distributed.

As both these behaviors were not normally distributed in relation to cultural diversity, a Mann-Whitney U Test was conducted to determine the if there is a significant difference between the cultural diversity groups. The Mann-Whitney U Test revealed that standardized frequency *giving positive feedback* was significantly higher in monocultural teams (Md = 0.001144, n = 79) than in multicultural teams (Md = 0.000000, n = 79), U = 312, z = -4.348, p = < 0.001. Similarly, the Mann Whitney U test indicated that the standardized frequency of *giving negative feedback* was significantly higher in monocultural teams (Md = 0.000490, n = 79) than in multicultural teams (Md = 0.000000, n = 79), U =359, z = -4.123, p = < 0.001.

In order to determine if moments of giving feedback had an effect on job performance, correlational analysis was conducted. As the verbal behaviors were not normally distributed, thus violating the assumption of normality of the Pearson's R, a correlational analysis was done by the Spearman's Rho correlation.

Table 9
Spearman's Rho correlation.

	Job performance	Giving positive feedback	Giving negative feedback
Job performance	1	-0.355*	-0.338*
Giving positive feedback	-0.355*	1	0.502*
Giving negative feedback	-0.338*	0.502*	1

Note. *p < .01, two tailed. N = 65.

As shown in Table 9, *Giving positive feedback* and *Giving negative feedback* were both significantly moderately negatively correlated with job performance (with -0.355 and -0.338 respectively). This indicated that both these behaviors had a negative effect on job performance.

5. DISCUSSION

The goal of this thesis was to assess the role of feedback in mono- and multicultural agile teams and its effect on job performance and its relations to arousal levels. The findings presented contribute to the feedback literature in four ways.

5.1 Theoretical implications

Firstly, through investigating moments of evaluation and their relationship with arousal levels, the evaluating scale developed by Meyer (2014) can be expanded. Whereas the evaluating scale concerns the gap in delivering and perceiving the directness of *negative feedback* across cultures, this thesis provides novel results on the role of *positive feedback*. More specifically, the occurrence of arousal peaks in moments of evaluations that were started by *positive feedback* are both in multi- and monocultural teams higher than the occurrence of arousal peaks in evaluation moments of *negative feedback*. As arousal levels are highly sensitive to both positive and negative emotions (Akinola, 2010), it would be meaningful to add *positive feedback* to Meyer's evaluating scale. Additionally, as the results indicate that multicultural teams experience a higher occurrence of arousal level peaks across all feedback characteristics, it would be meaningful to add the feedback characteristics to the evaluating scale. For instance, this thesis has made it evident that higher emotions are felt in evaluating moments that consist of *objective feedback*. It thus adds extra dimensions to the evaluating scale that should be considered.

Secondly, in moments of evaluation, the verbal behaviors *interrupting* and *defending one's own position* have a higher frequency in multicultural teams, while *active listening* and *informing with facts* have a higher frequency in monocultural teams. *Interrupting* and *defending one's own position* are negative relations-oriented behaviors, and form a mild counterproductive behavior (Hoogeboom et al, 2021). As these behaviors had a higher frequency in multicultural teams, this could indicate a positive relationship between the perceived higher frequency in arousal peaks in multicultural teams and a higher frequency of negative relations-oriented behavior.

Thirdly, this thesis had shed light on the role of feedback on the physiological state of individuals in both multicultural and monocultural agile teams. Namely, it has been shown that multicultural teams experience a higher occurrence of arousal peaks in moments of evaluation compared to monocultural teams. This is somewhat different than the findings of Lim (2016), who found that high arousal emotions are found more often in western cultures, and low arousal moments are found more often in eastern cultures. As the monocultural teams consist of Dutch speakers, which most presumably are team members from a western culture, this differs from the findings of Lim (2016). This could be due to different values among cultures, which results in multicultural clashes (Elashmawi, 1998) where emotions and arousal levels tend to rise. Additionally, it has been shown that feedback characteristics result in different physiological responses. Kung et al. (2016) highlighted the importance of framing feedback to the feedback receiver's cultural background in order to increase the motivation of the feedback receiver. As the feedback type, feedback valence, feedback level, and feedback source all influence the arousal peak frequency in both multi- and monocultural teams, it would be meaningful to take into account the feedback characteristics when framing feedback. As Kung et al. (2016) primarily looked at the role of feedback valence, the results presented here indicate that other feedback characteristics could also be added to the consideration of feedback framing.

Fourthly, as the effect of feedback on job performance has been investigated in the past, but resulted in mixed results regarding the direction of this relationship (DeShon et al., 2004; Guo et al., 2017; Zhou, 1998; George & Zhou, 2001; Van Dijk & Kluger, 2010; De Nisi and Kluger, 2000; Ammons, 1956; Kuvaas, 2011; Heslin and Latham, 2004), this thesis can offer a different perspective to this discussion by using an innovative way of measuring feedback through verbal behaviors. The results indicate a moderate negative relationship between job performance and both *Giving negative feedback* and *Giving positive feedback*. This means that any valence of feedback has a detrimental effect on job performance. In line with this, monocultural teams experienced a higher number of moments of feedback and simultaneously had a lower average job performance rating compared to multicultural teams. This is in line with the findings of Guo et al. (2017) that show a negative relationship between job performance and *negative feedback*. One reason for this negative relationship could be due to the quality of feedback. Feedback sources that deliver high-quality, specific feedback can create high contexts that influence job performance (Whitaker & Levy, 2012). Thus, it could be that by taking into consideration the quality of feedback, the correlation between job performance and giving feedback might have differed. It could also be an indication that perhaps the feedback given in the analyzed retrospective meetings was of low quality,

resulting in a negative relationship between job performance and giving feedback. This mainly concerns the feedback giver, the feedback receiver(s) might also influence this relationship. If a team considers itself as a high-performing team, it benefits from receiving feedback (Bailey & Thompson, 2000). Job performance measures the individual level performance. Perhaps if the team performance was considered, for instance through making a distinction between high-performing teams and low-performing teams, there may be a different relationship on the individual level visible as well. This could indicate that job performance in high-performing teams has a positive relationship with giving feedback, and low-performing teams indicating a negative relationship between job performance and giving feedback. Simultaneously, this would indicate that given the negative relationship seen in this thesis, the sample consisted primarily of lower-performing teams. Another reason for this negative relationship could be the setting in which the feedback was given. The data consists of agile teams from a Dutch organization. People from an Asian background viewed the Dutch communication style as direct, straightforward, and too harsh (Popov et al., 2022). Additionally, peer feedback from Dutch people was viewed as hurtful by Asians, and other Europeans were shocked by the rudeness of the feedback from the Dutch (Popov et al., 2022). This could indicate that in multicultural teams, clashes between the Dutch way of providing feedback and other cultures' perspectives on this resulted in a detrimental effect on job performance. It was found by Jamalinesari et al. (2015) that direct feedback resulted in a lower performance among students than indirect feedback. This may be the reason why in monocultural teams there is a negative relationship between giving feedback and job performance visible as well, assuming the Dutch way of providing direct feedback was dominant.

5.2 Practical Implications

Several practical implications can be made. First of all, from the results it can be noted that the verbal behaviors *interrupting* and *defending one's own position* occur more often in multicultural teams. Simultaneously, multicultural teams experience a higher occurrence of arousal peaks. The higher frequency of these behaviors could be a direct result of the higher occurrence in arousal peaks. This finding could help managers understand why verbal behaviors are triggered in relation to moments of evaluation. Managers can be made aware of the potential verbal behaviors that are caused by giving feedback and the arousal peaks that are a result of this. For instance, it could be beneficial for a team to avoid negative relations-oriented behaviors, which can cause counterproductive behavior. In that case, it would be wise to not start a moment of evaluation in a multicultural agile team which causes higher arousal levels that would result in these behaviors.

Secondly, these findings could give managers and other team members guidance in how cultural diversity might play a role in how feedback is given, as well as received through different arousal levels and verbal behaviors.

Thirdly, as the relationship between job performance and *giving (positive and negative) feedback* is a moderate negative relationship, managers and team members need to pay attention to providing feedback since this could hinder job performance. Alternatively, this result could also be interpreted combined with the findings of Heslin and Latham (2004), who found that high performers interpret feedback effectively, as opposed to low performers who interpret feedback ineffectively. Additionally, the feedback quality, the team performance, and the setting could play a role in the relationship of giving feedback and job performance. That would indicate that perhaps the relationship between job performance and giving feedback might be positive depending on, more complex, other factors not considered in this thesis. Thus, based on the findings in this thesis managers and team members should be careful with providing feedback, as it is detrimental to job performance.

Lastly, managers could take into account the feedback characteristics and the physiological responses these might give. *Positive feedback* results in a high occurrence of arousal peaks, which may be caused by the emotion happiness (Russell, 1980), whilst *subjective feedback* scored a low occurrence in arousal peaks, which may be the result of being bored or calm (Russell, 1980). Hence, managers that are seeking high arousal responses that cause emotions such as happy, tense, and glad, could focus on using *positive feedback* and *objective feedback*.

6. LIMITATIONS AND FUTURE RESEARCH

There are several limitations present in this thesis. First of all, the sample includes agile teams from one service institution. Therefore, it is limited to employees from this specific firm, and there could be a bias in the hiring process which has skewed the data. Therefore, future research may wish to include agile teams from a variety of organizations. Additionally, the sample included 10 agile teams consisting of 80 team members. This is a relatively small sample size, and the data could potentially have been more precise in a larger sample size. Consequently, future studies could include a larger sample size consisting of more teams and team members. The cultural diversity of a team was decided based on whether a meeting was conducted in English or Dutch. Hence, the degree of cultural diversity was not measured through a distinction in the number of people from a multicultural background or the inter-country differences. This was partly because the survey did not bring cultural preferences forward, merely the member's fluent language. It could thus be meaningful for future research to consider the cultural diversity of teams based on additional factors such as cultural preferences and inter-country differences.

Another limitation is that job performance was rated through self-assessment. This has several limiting factors. As each team member's job performance is only rated by one person (themselves), it could be not very accurate. Team members could also possibly have a biased opinion about themselves, resulting in biased results. Furthermore, there is also the possibility that cultural diversity affects the perception of values. Since the survey was based on a Likert-scale, it could be that people from Dutch backgrounds are more critical and more strict in rating themselves, resulting in a lower job performance compared to a person from a different culture that has a more lenient attitude towards higher numbers. This could be improved in future research either by increasing the number of raters or by basing job performance on more objective measurements than surveys. For example, it could be measured through individual-level KPIs. Lastly, this thesis consisted of a partial inductive research approach, which is subject to the researcher's opinions and perspectives, which may have led to false interpretations and conclusions. Hence, future research could apply a different research method, such as a deductive approach to minimize the researcher's opinions and perspectives. Finally, this thesis focused on the individual level of feedback moments in team settings. The effects of a team setting could be further explored in future research, as giving feedback to an individual might have an effect on other individuals in a team setting as well. Additionally, a team setting might have a different effect on the perception of the feedback by the feedback receiver(s) compared to an individual setting, leading to a difference in the effect of feedback on job performance. It would thus be meaningful for

future research to take into account the effects that a team setting might have on feedback. This could be done by analyzing not only the feedback receiver, but all meeting participants, or by comparing the feedback effectiveness in a team setting with an individual setting.

7. CONCLUSION

This thesis examined the role of feedback in mono- and multicultural agile teams, its effect on job performance and relations to arousal levels in a large service institution based in The Netherlands. Multicultural teams experienced a higher occurrence of arousal peaks in moments of evaluation. The giving feedback verbal behaviors had been grouped based on the feedback characteristics feedback type, feedback valence, feedback level and feedback source. Feedback characteristics had an influence in both multi-and monocultural teams in the frequency of arousal peaks. *Subjective feedback* led to the lowest frequency of arousal peaks in both mono- and multicultural teams, and *performance feedback* had a strong positive impact on arousal peaks in multicultural teams.

Giving negative feedback and *giving positive feedback* occur the most frequent in monocultural teams. Simultaneously monocultural teams had a lower job performance rating than multicultural teams. This can be explained by the moderate negative correlation both *giving negative feedback* and *giving positive feedback* had on job performance.

Additional findings have shown that multicultural teams and monocultural teams experienced different frequencies in all feedback characteristics, with the most noticeable differences being that *objective feedback* occurred the most in multicultural teams, and performance feedback occurred the most in monocultural teams. Verbal behaviors in moments of evaluation also show differences based on cultural diversity, with most noticeably monocultural teams experiencing more *active listening* and multicultural teams experiencing more *Interrupting.*

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10. APPENDIX

Appendix A

Table 1
The verbal behaviors and their definition that are considered in this thesis.

Behavior	**Definition**
Giving negative feedback constructive/friendly	Every behavior told in a nice way which leads to a negative experience/evaluation in relation to a person, the team, an action or a project.
Giving negative feedback destructive/hostile	Every behavior told in a unpleasant way which leads to a negative experience/evaluation in relation to a person, the team, an action or a project.
Giving positive feedback	Every behavior through which a person raises the Thanking status or feelings of another team member by judging and/or rewarding him/her positively, after the team member has shown positive behavior or achievements.
Defending one's own position	Every behavior in which a person is defending one's own self-interest or putting someone else at fault.
Disagreeing	Every behavior through which a person disagrees with one or more team members.
Agreeing	Every behavior through which a person agrees or back up (the ideas of) another or several other team members.
Verifying	Any behavior through which a person checks the state of affairs with regard to certain responsibilities or tasks of one or more team members or where clarification is requested.
Active listening	Every verbal or nonverbal behavior which shows that a team member pays attention to what is on the agenda or is comprehending what another team member is saying.
Informing with facts	Every behavior showing a person neutrally announces facts.
Own opinion	Every form of behavior through which a goal, directions, own opinions or priorities are discussed.
Interrupting	Every behavior through which a person interrupts another team member.
Humor	Every form of behavior through which a person laughs sincerely or makes funny jokes.
Stimulating teamwork	Every behavior which contributes to/results in improved cooperation between team members.
Shaping the discussion	Every form of behavior or act through which a person structures or shapes the conversation.
Showing disinterest	Every behavior that shows that someone is not attentively focused on the meeting.
Asking for ideas	Every behavior through which a person asks for the opinions or ideas of a team member or behaviors through which he/she stimulates the team in alternative ways of thinking.
Null behavior	No specific behavior
Long term	Every behavior through which a team member combines his/her own vision with that of the organization or elaborates the long-term goals of the organization/team.
Correcting	Every behavior through which another team member has to do exactly as they were said, given existing norms or arrangements etc.
Delegating	Every behavior through which tasks/roles are divided/discussed.
Sharing personal information	Every behavior through which a person talks about matters unrelated to work.

Showing personal interest	Every behavior through which a team member's personal interest or empathy is shown towards another team member.

Appendix B

Table 10
Frequency feedback characteristics per monocultural team.

Feedback characteristics	**TEAM A (monocultural)**	**TEAM B (monocultural)**	**TEAM C (monocultural)**	**TEAM D (monocultural)**
Feedback type				
Process	69.86%	91.84%	81.36%	97.44%
Performance	30.14%	8.16%	18.64%	2.56%
Feedback valence				
Positive	79.45%	55.10%	50.85%	61.54%
Negative	20.55%	44.90%	49.15%	38.46%
Feedback level				
Individual	32.88%	36.73%	33.90%	46.15%
Team	67.12%	63.27%	66.10%	53.85%
Feedback source				
Objective	19.18%	8.16%	8.47%	7.69%
Subjective	80.82%	91.84%	91.53%	92.31%

Table 11
Frequency feedback characteristics per multicultural team.

Feedback characteristics	TEAM E (Multi cultural)	TEAM F (Multicultural)	TEAM G (Multicultural)	TEAM H (Multicultural)	TEAM I (Multicultural)	TEAM J (Multicultural)
Feedback type						
Process	75.00%	100.00%	92.86%	100.00%	100.00%	90.63%
Performance	25.00%	0.00%	7.14%	0.00%	0.00%	10.34%
Feedback valence						
Positive	91.67%	100.00%	57.14%	52.94%	10.00%	56.25%
Negative	8.33%	0.00%	42.86%	47.06%	90.00%	43.75%
Feedback level						
Individual	83.33%	20.00%	28.57%	35.29%	0.00%	50.00%
Team	16.67%	80.00%	71.43%	64.71%	100.00%	50.00%
Feedback source						
Objective	8.33%	0.00%	7.14%	11.76%	50.00%	40.63%
Subjective	91.67%	100.00%	92.86%	88.24%	50.00%	59.38%

Appendix C

Transcript excerpt 1: Team A (monocultural)

F10: Ja. Wat misschien wel effe goed is, en daar hebben <persoon X> en ik, eh, denk ik ook wel eventjes, hè, want je ziet ook wel de ene bron gebruikt andere informatie als de andere bron, hè, informatie die niet altijd overeenkomt met mekaar. Nou, denk ik, dat is denk ik wel een goed, eh..
F2: Ja.
F10: Ontwikkelpunt zeg maar voor, eh...
F8: Wat gebeurt er precies dan?
F2: Nou, de data die opgeleverd wordt, die blijkt dus wel verschillend te zijn. Als ik een, eh.. zeg maar, eh.. gegevens eruit haal over afgelopen week, eh, van afgelopen week dan - dan cumulatief de laatste periode T3, dan blijkt in een keer die laatste twee weken niet mee pak, maar ik weet zeker dat er een paar mensen beeldgesprekken hadden, dus ga ik zoeken, kan - kom ik er niet uit in ons systeem wat, eh.. < >. En, eh, <persoon y> gaat raadplegen en die gaat het bij een andere manier ergens anders gaat die het - data eruit halen en haalt hem er wel uit.
F9: Hm.
F2: En.
F8: Dat moet niet kunnen.
F5: Nee.
F3: Nee.
F2: Nou, precies, dus dat zijn wat dingen die moet ik wel effe zien te tackelen.
F9: Dat is wel een hele goeie voor T1 inderdaad.
F2: Ja, sowieso. Maar ik ga 'm eerst gewoon effe een paar - of we gaan 'm eerst.
F9: Ja.
F2: < > natuurlijk, want, ja, dat moet boven water, want dat is heel frustrerend, want dan ben ik volop aan het rekenen en blijkt dus dat ik maar twee, eh.. dingen of een ding klopt. Nou ja, dat - dat mag best op stil.

Free translation of transcript excerpt 1:

F10: Yes. What maybe would be a good point, and <person x> and me have talked about this. You see that the one source uses different information than the other source. The information does not always match each other. That is a good development point.
F2: The data that is delivered turns out to be different. If I take out data from the past week, then cumulative the last period T3, then it suddenly turns out that the last two weeks are missing. But I'm sure a few people had video conversations. <> That has to come to the surface, because that is very frustrating, as I'm doing all the calculations and it turns out that only two things or one thing is correct.

Transcript excerpt 2: Team H (multicultural)

F1: Not only other team members, but also other teams. Because it's really not productive.
F3: Yeah
F1: Like I can understand if you have frustrations, right? But then also to say like in a retro like: "ok I think well this is – is this not the responsibility of the scrum master" or then say like: "oh but uh you were not there in the stand-up" or then saying: "You didn't refine it well" or "you should have done the analyses". That is not really working productive in a team. And in a team setup with just blaming others, right? Also causes frustration.
F7: so that's how you felt?
F1: yeah, I feel yeah that I get like massively annoyed.

Transcript excerpt 3: Team J (multicultural)

F1: We were on the right track, we took of course a risk to start the implementation. But now we there and it is confirmed, eh, yeah, happy of course the – we are in fully alignment with the ACB. Yeah thanks – thanks for the update, eh, <person x>. Any questions from anyone regarding that? So yeah I think, eh, there is a bit more to come, we need to see how we are going to plan, eh, that. I suppose it will still be in the scope of the magic work packages squad so than in the handover process with <person y> and <person z> an -- and others, eh, then also the depth engineers you need to be aware or become aware of that . But you we still need to update the planning for that, eh, – for that one, he, <person x>?