Rotating leadership: the process within organizational improvisation

Author: A.M. Brunink
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT: This research is about rotating leadership and the process within organizational improvisation. Where, for example, directive leadership has one central leader, this leader is absent in rotating leadership. With help from the unorthodox and relatively new research method theatrical simulation, the process of rotating leadership within new product development teams is visualized. The results are the conclusions that the beginning moments of the creative process are very important. In this first part, most of the ideas were presented and also the informal leader raises. This in contrast to the expected situation of equality within rotating leadership. In most of the cases the informal leader was not explicitly chosen but stands up with the support by his own personality.

Supervisors: **K. Visscher**
M. Ehrenhard
G. van Bilsen

Keywords
Leadership, rotating leadership, organizational improvisation, new product development teams and theatrical simulation.

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. *4th IBA Bachelor Thesis Conference*, November 6th, 2014, Enschede, The Netherlands. Copyright 2014, University of Twente, Faculty of Management and Governance.

1. INTRODUCTION

For organizations it is, nowadays, very important to adapt to and capitalize on a rapidly changing environment (Crossan et al., 1996). Besides this fast reaction on unexpected change, it is for organizations important to innovate in order to survive (Amabile, 1998). Over the last years improvisation has received recognition as a strategic competence. A strategic competence that helps today's organizations' requirements for change, adaptability, responsiveness to the environment, loose boundaries and minimal hierarchy (Hatch, 1996). Where planning becomes impractical, the ability to lead improvisation is critical (Vera & Rodriguez-Lopez, 2007).

1.1 Organizational improvisation

Early research into the topic of improvisation was mainly focused on Indian and Jazz music (Zack, 2000) and the theatre (Vera & Crossan, 2004). These researches were focused on the outcome on stage and the process. Moorman & Miner (1998), Pina e Cunha (1999) and Akgün et al. (2007) focused their researches on organizational improvisation as a specific subject. Where earlier research was focused on music and theater, the focus is nowadays more on organizations and their traditional business goals. Examples for these goals are efficiency, cost reduction and new product development (Moorman & Miner, 1998; Eisenhardt & Tabrizi, 1995). Organizational improvisation can be defined as:

"The conception of action as it unfolds, by an organization and/or its members, drawing on available material, cognitive, affective and social resources" (Pina e Cunha et al., 1999, p. 302).

Within the research into organizational improvisation also the paradox between freedom and control obtained a more significant role (Pina e Cunha et al., 2003). The main problem related to this paradox is that leaders want to control and want (or have) to give a certain amount of freedom to their employees. Some examples of control can be controlling the outcomes (final products) or taking care for an efficient way of working. On the other way, there is also need for freedom. For example, to motivate employees to come up with their own ideas and work them out.

Employees want on the one hand freedom to do what is 'good' in their opinion. But on the other hand they want to have some control about the process and the other employees. So this paradox is relevant for both employees and leaders.

The relationship between different leadership styles and improvisation was topic of earlier research (Pina e Cunha et al., 2003; Van Bilsen, 2010). These researches concluded that servant leadership and rotating leadership are leadership styles where organizational improvisation can have some benefits. In contrast to servant and rotating leadership, directive leadership is supposed to have a negative influence on the outcomes of organizational improvisation.

1.2 Research goal

The goal for this research is to analyze how rotating leadership is organized in organizational improvisation. Rotating leadership is a leadership style where leadership is not only one person's responsibility. Instead of this, leadership is the responsibility of the whole group (Pearce et al., 2010). Therefore rotating leadership is a bit difficult to use in organizations. For example the question 'who is responsible for failures?' is more difficult to answer. Also the implementation has to be good in order to prevent a situation without any form of leadership. Interesting is to analyze how and why the role of 'being the leader' is shifting from one to another and how this process is organized.

To find this out, theatrical simulation is used as research method. Within this research deeper investigation of rotating leadership gets a central role. Where earlier research was more focused on organizational improvisation (Moorman & Miller; Akgün et al., 2007) and on leadership within organizational improvisation (Pina e Cunha, 2003; Van Bilsen, 2010), this research is focused on the process of rotating leadership within organizational improvisation. How does rotating leadership work? What are arguments for changing the leadership role?

1.3 Research method

In the research of Van Bilsen (2010), an unorthodox research method called theatrical simulation was used. Theatrical simulation is an innovative method where situations from reality are simulated. Wagenaar (2008) described in her research that simulation has a focus on 'what could be' in an abstract world.

Van Bilsen used theatrical simulation to show the differences for three different leadership styles in organizational improvisation. For every leadership style about ten scenes were developed. For every single one of these scenes, the actors got an assignment.

Two of the conclusions from Van Bilsen's research (2010) are that rotating leadership solves the paradox between control and freedom as mentioned in Pina e Cunha et al. (2003) and that rotating leadership is suitable for organizational improvisation (Van Bilsen, 2010). In this research the process of rotating leadership in combination with organizational improvisation will be deeper investigated.

1.4 Research questions

In order to elaborate this thesis in a systematic way, one main research and three sub questions were stated. The main focus for this research is on rotating leadership and how this leadership style is organized during the innovative processes of new product development teams within organizational improvisation. The main research question for this research is:

'How and why does rotating leadership in NPD teams work during the process of organizational improvisation?'

The reason that organizational improvisation was selected, is because of the earlier mentioned growing importance of fast reactions on environmental change (Crossan et al., 1996). Working with new product development (NPD) teams is a good reaction on this. These teams are especially focused on new product development (Koen et al., 2001). Also other forms of new product development teams can be used. For example new product development teams which take care for the complete process of bringing a new product to the market (Sivasubramaniam et al., 2012).

The research goal for this research is to analyze how rotating leadership is organized in organizational improvisation. The following three sub question will help to reach this goal, the first one is:

- What is rotating leadership?

Within this sub question the concept of rotating leadership will be elaborated. Also how rotating leadership is used in new product development teams and organizational improvisation will be discussed.

- How is rotating leadership distributed during organizational improvisation?

Within this question, the focus is on the way the rotating leadership role shifts from one to the other during the process of organizational improvisation. Two different kinds of figures will be used. This to make a clear overview of the shifts within the scenes.

- Why does leadership change during the process of organizational improvisation?

Within this question the focus will be on the question 'why leadership does change?'. The last two questions will be answered with help from the scenes as made by Van Bilsen (2010).

1.5 Structure

The structure for this paper is as follows: after this introduction, the theoretical framework of this research will be presented. This framework will consist out of a description of the terms leadership and rotating leadership. The third part will be a chapter about methodology. Here the way the research will be elaborated is explained. After the methodology part, the data for this research will be showed. The next part will be the analysis part. Here the data will be analyzed. After this a conclusion will be drawn and a discussion will be presented.

2. THEORETICAL FRAMEWORK

This research is about the process of rotating leadership within organizational improvisation. For this theoretical framework the term 'leadership' will be discussed first. After this the term 'rotating leadership' will be discussed.

2.1 Leadership

In the literature about leadership, a great number of definitions for the term 'leadership' were introduced. Within these definitions a distinction can be made between a more traditional and a more modernized view.

2.1.1 Traditional vs. modern view

Where traditional leadership makes a simple distinction between those who are the leader and those who are not, the modern view of leadership does not make this simple distinction. For this research the following definition for traditional leadership will be selected:

"*Leadership is about one person (the leader) getting other people (the followers) to do something"* (Kort, 2008, p. 1).

In contrast to traditional leadership, nowadays we can distinguish more and modernized leadership styles. Examples are rotating leadership, servant leadership, improvisational leadership (Pina e Cunha et al., 2003) and democratic leadership (Gastil, 1994). Within these leadership styles, it is more difficult to make a simple distinction as made before. For example, within rotating leadership the leader role is continuously subject to change. For this research the following definition for those 'modern' leadership styles was selected:

"Leadership is an interaction between two or more members of a group that often involves a structuring or restructuring of the situation and the perceptions and expectations of the members… Leadership occurs when one group member modifies the motivation of competencies of others in the group. Any member of the group can exhibit some amount of leadership" (Bass, 1990, p. 19-20).

More about the definition of rotating leadership for this research can be found in chapter 2.2.

2.1.2 Leadership and organizational improvisation

In order to implement organizational improvisation in an efficient way, it is important to keep in mind that leadership is important for organizational improvisation (Vera & Rodriguez-Lopez, 2007). After all, leaders help the organizations and also help new product development teams to set goals, shaping teams and select workforce (Denehy, 2008). Furthermore leadership is important to solve the paradox between freedom and control (Pina e Cunha et al., 2003). Later on more will be reported on this.

In the literature on organizational improvisation, different researchers (Pina e Cunha, 2003; Bastien & Hostager, 1988; Van Bilsen, 2010) found that there are two leadership styles that have a positive effect on organizational improvisation. These two leadership styles are servant leadership and rotating leadership.

Servant leadership is a leadership style which is known as a people-centered leadership style (Clegg et al., 2007). In the servant leadership style the ideal of service is embedded in the follower-leader relationships. In contrast to directive leadership, leaders are more focused on the human part (Greenleaf, 1977) than on the organizational objectives (Graham, 1991). In short, servant leadership is a style in which leaders should be servants first and leaders second (Greenleaf, 1970). Rotating leadership will be discussed later.

Like written before, not every leadership style fits into the ideas of organizational improvisation (Pina e Cunha, 2003; Van Bilsen, 2010). For organizational improvisation a leadership style where the leader is able to make a synthesis among apparently conflicting or dissonant styles and procedures, while allowing individual discretion for goal attainment is important (Pina e Cunha, 2003).

In servant and rotating leadership the common characteristic can be found in the fact that the leader gives the employees freedom and space to work out their own ideas. This in contradiction to directive leadership, here the leader takes the decisions himself without interventions of other people (Pina e Cunha, 2003). In summary, leadership is important for the relation between the organization and the amount of improvisation within the boundaries of the organization. Not every leadership style solves the paradox between control and freedom. Therefore not every leadership style offers the same amount of control and freedom.

2.2 Rotating leadership

Rotating leadership is a leadership style whereby leadership is distributed among team members rather than focused on a single leader (Carson et al., 2007). Rotating leadership is comparable to distributed leadership and shared leadership. Where the leader of a directive leadership style has a strong and formal position, this formal and strong position of the leader is absent within rotating leadership. In other words, rotating leadership is characterized by equality (Pina e Cunha et al, 2003). This means that every member of a new product development team has the same rights and is on the same hierarchical level.

There are many components and factors involved in rotating leadership. The research of Carson et al. (2007) reports the following on this: *"shared leadership is facilitated by an overall team environment that consists of three dimensions: shared purpose, social support and voice"* (Carson et al., 2007, p. 1222).

Within rotating leadership an overall team environment is important. The team environment consists out of three parts. The first one is 'having a shared purpose'. This can be a shared assignment or a shared profit target. Second is 'social support'. This is the support team members give each other after dropping a good idea. The last one is voice.

Carson et al. (2007) defined it as the degree to which team members have input into how the team carries out its purpose.

Wood (2005) suggested in his research the following characteristics of rotating leadership: decentralized interaction, collective task completion, reciprocal support and skill development. Decentralized interaction is interaction between two (or more) employees without intervention of a leader or supervisor. Collective task completion is the willingness to work together and to accomplish the common task. The third characteristic is reciprocal support. This is the support that the team members provide to each other's problems and ideas. The fourth and last one is skill development, this is the personal development of the team member during the process.

Where Wood's research (2005) focused on rotating leadership in management teams, the research of Davis and Eisenhardt (2011) focuses on rotating leadership and (collaborative) innovation. Davis and Eisenhardt distinguished three components of innovation within rotating leadership. The first of these three components is 'alternating decision control between partners to access their complementary capabilities'. This means that the members of a team will lead the team when their specific capability is asked. The second component is 'zig-zagging objectives to develop deep and broad innovation search trajectories'. This means that the team has different goals. These goals are continuously changing and these are deep and broad trajectories to reach the goals. The third component is 'fluctuating network cascades to mobilize diverse participants over time'. This means that every team member contributes to the project and can also use networks to contribute to the final products (Davis and Eisenhardt, 2011).

2.2.1 Control vs. Freedom paradox

A paradox is *"the simultaneous presence of contradictory, even mutually exclusive elements"*(Cameron & Quinn, 1988, p. 2). One of the most famous paradoxes in the literature about leadership is the paradox between control and freedom. This paradox can be seen in two perspectives: the manager and the employee.

The manager wants to control the employees and the final products. On the other hand leaders want input from employees. For example own ideas (Clegg et al., 2002). The employee wants to have some room for own ideas and input but on the other hand also wants to control the process at sometimes. For example when his or her special expertise is asked. Pina e Cunha (2003) found that rotating leadership is a leadership style which solves the paradox between freedom and control. Van Bilsen (2010) also found this and reported the following on this:

"Hypothesis 2a (Rotating leadership is able to solve the paradox between freedom and control) can also be confirmed, although because for different reasons. Rotating leadership gives the entire team the possibility to exercise control over the process, and gives the team members the freedom to put in new ideas and build on those of others. The synthesis made in rotating leadership is that multiple roles of a leader can be fulfilled simultaneously by different team members. This is only possible if team member are able and willing to take and release the leadership role that a process needs." (Van Bilsen, 2010, p. 47)

2.2.2 Risk of rotating leadership

A disadvantage of rotating leadership is the possibility that nobody takes the role of leader. When for example expertise in a certain field is asked and nobody owns the asked expertise. This situation will result in a situation of anarchy. This is a situation in which nobody is the leader and there will not be any interaction between the team members. The fact that there is no leader also has consequences for the work that is delivered. No leader means less or worse teamwork (Van Bilsen, 2010). In case of (hardly) no or bad leadership, all the team members 'o back' to their own expertise and do not take any responsibilities for issues out of his expertise (Van Bilsen, 2010).

2.2.3 Rotating leadership and NPD teams

Rotating leadership is one of the leadership styles in which the control vs. freedom paradox is solved (Pina e Cunha, 2003). By solving this paradox, the idea of a central leader is rejected. Instead of this central leader, the team members have to accept that at one moment the member can be the leader or at another moment the member can be the follower (Clegg et al., 2002).

One of the core characteristics of rotating leadership is adapting to and building on each other's ideas. In the research of Van Bilsen (2010), a combination between rotating leadership and new product development teams showed more teamwork between the team members. This mainly because of the collective task completion and reciprocal support (Wood, 2005) and the second component: 'zig-zagging objectives to develop deep and broad innovation search trajectories' of Davis and Eisenhardt (2011). These components make (more) teamwork necessary in order to accomplish the assignments they got. Besides this bigger amount of teamwork, Van Bilsen (2010) also found that the solved paradox also brings a more positive attitude during team work.

Another important point is the disadvantage mentioned before. The risk of having no leader within rotating leadership is relatively big. This is because of the fact that the feeling of equality is bigger than in a directive leadership style. As said before: when every team member treats each other as equals, there is a change that nobody takes the leadership. Without leadership, less teamwork is observable (Van Bilsen, 2010). A situation without leadership may arise from the lack of expertise on a certain field.

2.2.4 Rotating leadership and organizational improvisation

Following Pina e Cunha (2003), the stimulation of improvised behaviors has been mainly related to two elements: minimal structures and experimental cultures. Minimal structures are the set of controls employed to accomplish the synthesis of high levels of autonomy and control (Bastien and Hostager, 1988). Minimal structures are based upon a social component. Examples for this social component are behavioral norms and communicative codes. Second part is the technical component. Examples for this component are skills, knowledge and techno-structural conditions (Bastien and Hostager, 1988).

The second element are the experimental cultures. This is the culture which promote action and learning by doing (Weick, 1995). So these experimental cultures tolerate errors and failures in innovations (Craig and Hart, 1992). On the one hand serves rotating leadership the need for minimal structures. The team members are relatively free of control and have freedom to make most of the decisions themselves. On the other hand, within rotating leadership action is promoted. An example is that every team member is encouraged to put in ideas in order to make it possible for other team members to build on this ideas. So, these two components are important for implementing improvisation within rotating leadership.

To summarize, rotating leadership is a leadership style in which equality between the different team members is important. In contrast to directive leadership, rotating leadership does not have a central leader and nobody is responsible in case of a failure.

In combination with organizational improvisation, it is important to keep in mind that improvisation is encouraged by minimal structures and experimental cultures. Finally, rotating leadership is a leadership style which requires a lot of teamwork in order to reach goals and reciprocal support.

3. METHODOLOGY

The research method that will be used for this research is the unorthodox research method theatrical simulation in the hyper reality. Van Bilsen (2010) developed for his master thesis theatrical simulation within new product development teams. These simulations will also be the set of data for this research but before introducing the simulations, the term 'leadership' will be operationalized first. From now on every time a scene is mentioned, this will be done by the following notion: scene 4 is scene 4.1.4.

3.1 Leadership for this research

In general, rotating leadership is more than only an interaction between two or more members of a (new product development) team. Team members have to accept each other's ideas, support these ideas, give some input for improvements and build on them further. This last task is, together with accepting the idea, better known as 'yes-anding' leadership (Crossan, 1998).

This phenomenon was investigated by Ringstrom (2001). His research concluded that 'yes-anding leadership' creates a basic for further development of the ideas and will result in more refined characters and develops new situations. So, 'yes-anding' leadership can be seen as leadership for a moment. After the moment of introducing an idea, the leadership directly shifts to someone with an additional idea on this. So, two of the reasons for a shift in leadership are the following: one is the adaption and further development of an idea and second is with help from feedback. Sometimes a situation is observable where one of the actors 'gives' leadership with help from feedback, later on more will be reported on this.

In order to make this definition a bit easier to understand, two examples will be presented. The first one is an example of what leadership is and the second one is an example of what leadership is not.

Two actors are busy with working out an idea, a third actor is intervening with some feedback and an own idea. At this moment this third actor uses feedback to tell the first two actors what to do. Now this third actor is the leader (for example: scene 4.1.3, 6:27 and 8:49)

Textbox 1. 'What leadership is'

When actor 1 is giving feedback but this feedback does not contribute to the current idea or when actor 1 is giving feedback but this feedback is rejected. Another example is the moment that actor 1 comes up with an idea but this idea is rejected by the other actors. Last one is the following: actor 2 is the leader and actor 1 provides feedback but this moment is immediately followed by actor 2 with feedback or an idea. In this case, the leadership role stays with actor 2 (for example: scene 4.1.2, 2:55).

Textbox 2. 'What leadership is not'

Now a second couple of examples will be presented. The first one is an example of what rotation is and the second one is an example of what rotation is not.

Two actors are discussing an idea. Actor 1 comes up with an idea, this idea is accepted by actor 2. Actor 2 builds on it further and this elaboration is accepted by actor 1. Now the leadership shifts from actor 1 to actor 2 (for example: scene 4.1.3, 5:27).

Textbox 3. 'What rotation is'

At one moment, actor 1 is the leader. Actor 1 is in discussion with actor 2. On that moment actor 2 is proposing an idea while actor 1 is judging this idea and discuss it with other actors. In this case, this judging actor (actor 1) stays in the leading role (for example: scene 4.1.3, 11:39).

Textbox 4. 'What rotation is not'

The text is originally from scene 4.1.2 and scene 4.1.3. The names of the actors are replaced by random numbers.

3.2 Theatrical simulation

Research can be done in three ways: a more abstract one, a concrete one and an artificial one. Where the abstract research is more focused on theory, the concrete research is focused on the empirical research. Finally artificial research focuses on simulation (Wagenaar, 2008).

Where the theoretical and empirical research are widely known and enjoy great reputation, the abstract (simulational) research is mostly known from computer simulation. The most important question what abstract research is, is the question 'what could be?' (Wagenaar, 2008).

Van Bilsen (2010) used simulation in order to draw conclusions about the influences of leadership styles on organizational improvisation. Simulation can be defined as:

"The concept of imitate one process by another process" (Hartman, 1996, p. 5).

The scenes made by Van Bilsen (2010) will provide a plausible representation of reality. This because simulation gives researchers a large amount of control such as personalities, the use of experienced actors and the introduction of clear instructions. So, the real process of new product development teams in organizations is imitated by the scenes used for this research.

Simulation is mostly part of a learning or/and development process (Inbar and Stoll, 1972). In the research of Van Bilsen (2010) for each leadership style, around ten scenes were made. These actors are during the scenes members of one new product development (NPD) team. For example, one of the assignments during one of the rotating leadership scenes was:

"*Make a suit of armor for the empress that is both protective and strong as well as becoming and womanly*" (Van Bilsen, 2010, p. 36).

Not only the assignments differ but also the instructions regarding the leadership style. Actors who are the leader in directive leadership scenes got instructions like: 'you tell subordinates what to do and how to do it'.

Actors in rotating leadership got instructions like: ‘you describe the problem and conditions and make suggestions, but you leave it to subordinates to decide what to do and how to do it’ (Van Bilsen, 2010). These assignments and instructions give researchers a big amount of control and so on, it is a good way of research.

3.3 Data for this research

The data for this research consists out of the scenes developed by Van Bilsen (2010). Four of the scenes are also used in his research. The other five were also made by Van Bilsen but where not part of his research. One example of a scene, is the following (original numbers are retained):

- *For simulation 4.2 (Rotating): Make a means of transport for the empress that is elegant, spacious enough for her wardrobe and that is able to fend off attacks from highwaymen.* (Van Bilsen, 2010, p. 36)

In total nine scenes will be analyzed for this research. Below a stage view from the above-mentioned scene is presented. The stage view is originally from Van Bilsen (2010, p. 45), simulation 3.1 is presented. The letters in the figure represent the different actors.

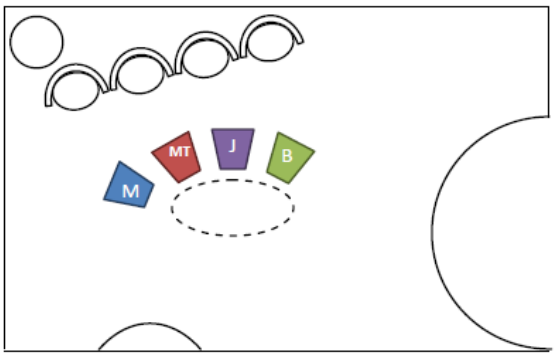


Figure 1. Stage plan for a simulation (Van Bilsen, 2010)

3.4 Method for this research

For this research the following steps will be used to elaborate this research in a systematic way:

The first step is analyzing the scenes and discover when the leader role is shifting among the team members. To determine if there is a shift or not, the previous mentioned definition will be used (see paragraph 2.1.1 & 3.1). After this, the process will be visualized. This will be done in two ways. The first one is the figures in the next paragraph, for example figure 2. These figures are created with help from Lucidchart software. With help from these figures, the shifts of leadership become visible. The second way is the way as presented in figure 14. These figures were created with help from Microsoft Visio software. Besides for visualizing the shifts, those figures were also used for further analysis of the data. In these figures the reason why the leadership shifts will be presented.

In order to take care for a precise analysis, the scenes were watched at least three or four times. The first time to get in touch with the assignment and the names of the actors. The second time to look when leadership shifts were observable. The third and fourth time for checking the findings from the second round but also to determine the reason why the leadership shifts. These findings are included in figure 14 up to figure 17.

Every scene will first get a small introduction. This introduction will consist out of the introduction of the assignment. After introducing the figure with the leadership shifts, the scene will be discussed briefly.

Within this discussion, every time the following questions will be answered/the following information will be presented:

- Are the actors the same as in another scene?
- Is there a patron of leadership shifts observable between different actors or is an informal leader observable?
- Which of the earlier mentioned characteristics of rotating leadership (or the lack of those characteristics) can be observed? (Wood, 2005; Carson et al., 2007; Pina e Cunha et al., 2003; Van Bilsen, 2010 and Davis & Eisenhardt, 2011).

3.5 Notations

For a shift of leadership between two persons an arrow will be used. The arrow points the person who ‘gets’ the leadership. The notation ‘2:38’ refers to the moment in the scene where leadership can observed. So after 2 minutes and 38 seconds, there is a leadership shift observable. The names of the actors are replaced by numbers.

4. DATA

For this research the scenes from Van Bilsen (2010) will be used. Van Bilsen developed about ten scenes for every leadership style (directive, servant and rotating leadership). For this research the scenes with rotating leadership will be used. Later on the results from these analysis will be discussed. Not every scene is played by the same actors. The actors are the same in scene 1 & 2, scene 3 & 4, scene 6 & 7 and scene 8 & 9.

4.1 First figure

In the data section of this research, two different figures will be presented. The first set of figures will be presented in this paragraph.

4.1.1 First scene: Clean-up & sewer system

In the first scene which was analyzed for this research, the assignment is to clean-up the workplace and to make a sewer system that not smells too much. With help from the figure below the leadership shifts will be showed.

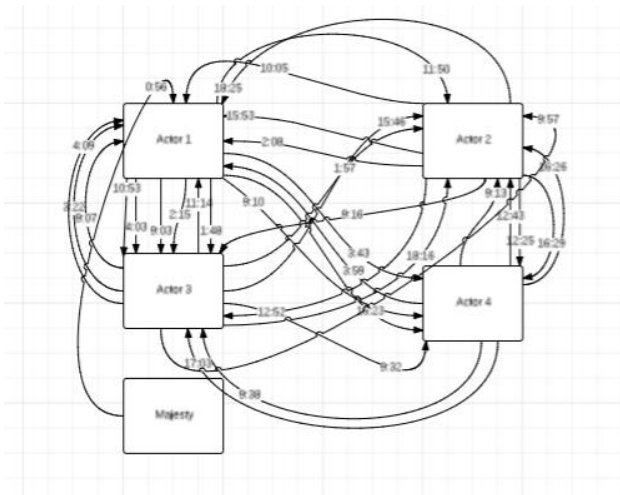


Figure 2. Scene 1: Clean-up & sewer system

The actors in this scene are the same as in the next scene (4.1.2). There is not particular one interaction observable between the different actors. Instead of this, one actor is responsible for most of the shifts. This actor can be seen as the informal leader.

This does not match with Pina e Cunha (2003), this research mentioned equality as a characteristic of rotating leadership. Second, this can be explained by the 'voice' of the actor (Carson et al., 2007).

4.1.2 Second scene: Armor I

This is the second scene which was analyzed for this research. In the beginning phase of the scene an actor, the majesty, explains the assignment for the new product development team. The members of this team are in this scene so called guild masters. The assignment is to make an armor that is useful and also 'nice to wear'. With help from the figure below the leadership shifts will be showed.

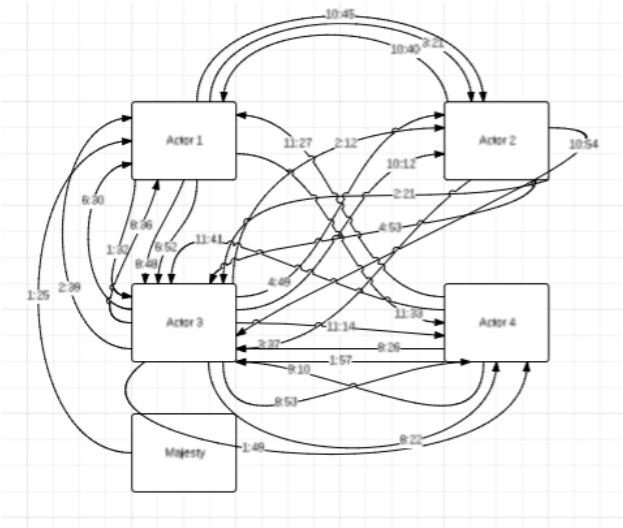


Figure 3. Scene 2: Armor I

The actors in this scene are the same as in the previous scene (4.1.1). In this scene, the same actor as in the previous scene (actor 3) becomes the informal leader. This means that this actor is important in decision making within the process. Again this can possibly be attributed to the third aspect of Carson's (2007) research, voice. The selection of an informal leader can also results in a disadvantage, an example is the finding of Van Bilsen (2010). Van Bilsen found that a combination between rotating leadership and new product development teams show more teamwork between the team members. This effect could be damaged when an informal leader gets a too big role.

4.1.3 Third scene: Armor II

This is the third scene which was analyzed for this research.

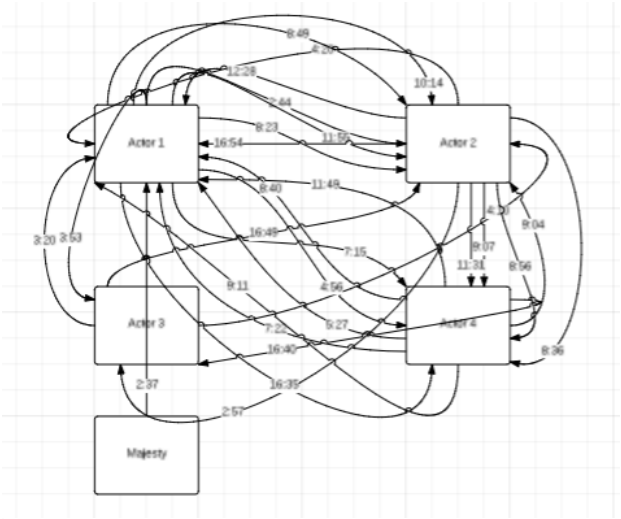


Figure 4. Scene 3: Armor II

In this scene, the assignment is the same as the assignment in the previous paragraph: making an armor. With help from the figure below the leadership shifts will be showed.

In this third scene also a shared assignment was introduced by the majesty. In the figure above we can observe an interaction between two actors. Actor 1 and actor 2 'got' most of the arrows. Between these actors a combination between collective task completion and reciprocal support is observable. On the one hand the actors help each other in developing the product but on the other hand the actors want to complete the assignment as good as possible so they also interfere each other's ideas.

4.1.4 Fourth scene: Vehicle I

In the fourth scene which was analyzed for this research, the assignment is to make a vehicle. This vehicle has to bring the majesty safe from A to B. With help from the figure below the leadership shifts will be showed.

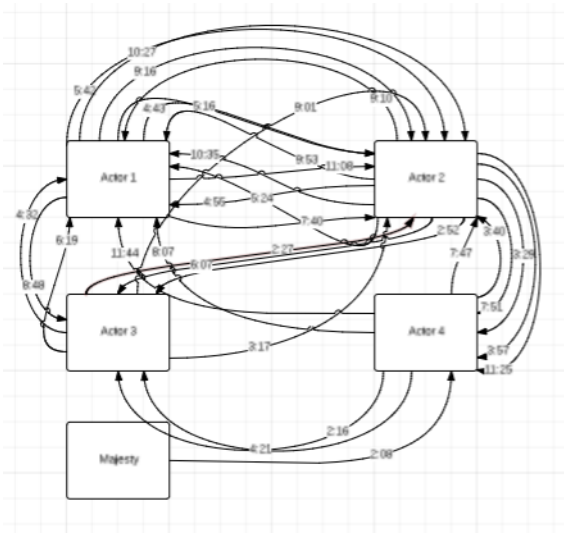


Figure 5. Scene 4: Vehicle I

In this fourth scene, the actors are the same as in the previous scene (4.1.3). In the first phase of the scene 'the objectives are 'zig-zagging' to develop deep and broad innovation search trajectories' (Davis and Eisenhardt, 2011). After the beginning phase, the leadership is (again) mainly between actor 1 and actor 2 with some interventions from the other two actors. The actors 1 and 2 are the same in both figures. Actor 3 and 4 are changed and not in both scenes the same number.

4.1.5 Fifth scene: Armor III

In the fifth scene which was analyzed for this research, the assignment is the same as the assignment in the two of the previous paragraphs: making an armor. With help from the figure below the leadership shifts will be showed.

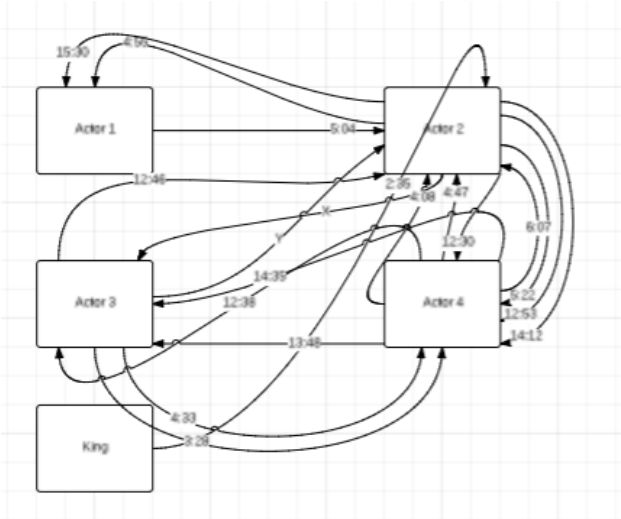


Figure 6. Scene 5: Armor III

Because the bigger amount of shifts between actor 2 and actor 3 the time slots between these two actors are replaced by X and Y. X is the moment that the leadership shifts from actor 2 to actor 3 on the following moments: 3:01, 3:20, 4:26, 6:21, 9:13 and 11:23. Y is the moment that the leadership shifts from actor 3 to actor 2 on the following moments: 3:05, 7:44, 9:48, 11:34, 13:54 and 15:07.

In this fifth scene, the actors does not correspond with another scene. In this scene the interaction is for the major part between actor 2 and actor 3. Wood (2005), in his research, called this decentralized interaction. This is an interaction between two team members without intervention of a leader. This phenomenon can be observed by looking to the timeslots mentioned above. Most of the timeslots are followed-up by each other immediately. Actor 1 and 4 are less involved within the innovative process, this can possibly decrease the quality of team work (Van Bilsen, 2010).

4.1.6 Sixth scene: Costume

In the sixth scene which was analyzed for this research, the assignment is to make a costume that looks good and also provide some safety for enemies. With help from the figure below the leadership shifts will be showed.

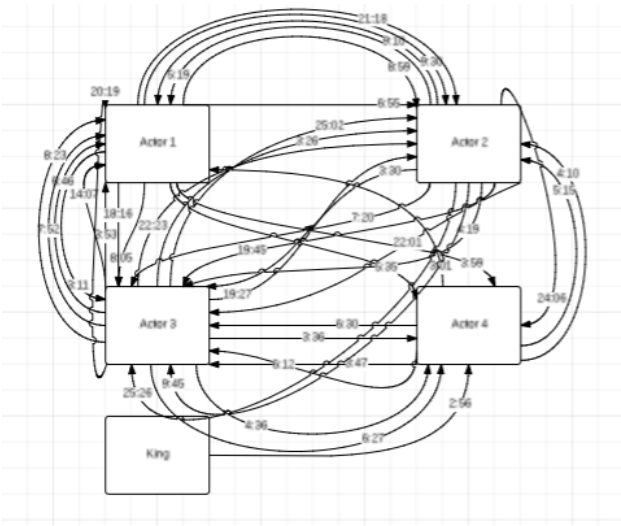


Figure 7. Scene 6: Costume

In this scene, the actors are the same as in the next scene. The beginning part of the scene is different than the previous scenes. More than in the other scenes, the actors are more busy with their own expertise. After the introduction of the assignment by the king, every actor take that part of the assignment that suits with their own expertise. With help from this focus on expertise, bigger gaps in shifts can be observed. When the actors are ready with making plans and when they all know what to do, a big gap in the shifts can be observed (5:46-9:42). Here everybody is busy with his own task without help from the other actors. Davis and Eisenhardt (2011) called this 'alternating decision control between partners to access their complementary capabilities', this means that members will guide or help the team when his specialty is asked. Based on the amount of leadership shifts, actor 2 can be identified as the informal leader.

4.1.7 Seventh scene: Vehicle II

In the seventh scene which was analyzed for this research, the assignment is the same as the assignment in the fourth scene: making an vehicle. With help from the figure below the leadership shifts will be showed.

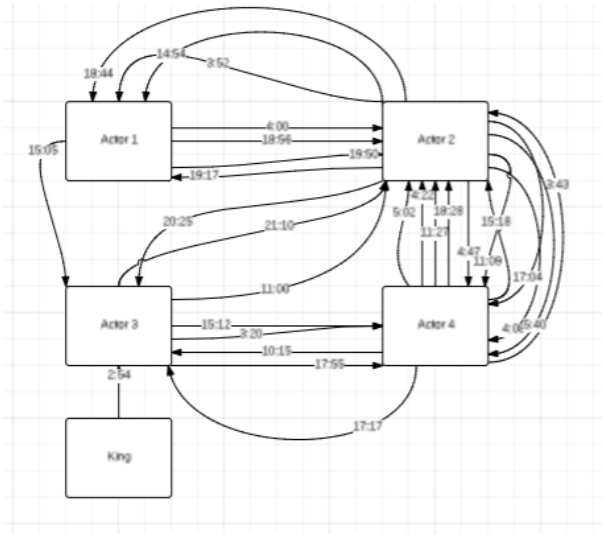


Figure 8. Scene 7: Vehicle II

In the seventh scene, the actors are the same as in the previous scene. Remarkable is that in the beginning phase of the scene, an interaction can be observed between the different team members. So in this phase social support is observable. The support team members give each other support after dropping an idea. Support consists out of for example positive or negative feedback or yes-anding on the previous idea. Carson et al. (2007) mentioned this as a dimension of shared or rotating leadership.

4.1.8 Eighth scene: Clean-up & armor

In the eighth scene which was analyzed for this research, the assignment is to clean up the work place. After this first six minutes (where hardly no leadership can be observed), the majesty introduced another assignment. The assignment for the second part of the scene is to make an armor that suits the fashion trends in the Middle Ages. With help from the figure below the leadership shifts will be showed.

In this scene, the actors are the same as in the next scene. The scene consists out of two smaller scenes. In this first part, everybody is focusing on their own expertise.

The focus on their own expertise can be declared by the theory of Davis and Eisenhardt (2011). Everybody is doing things what he or she can do best to improve the team's achievement.

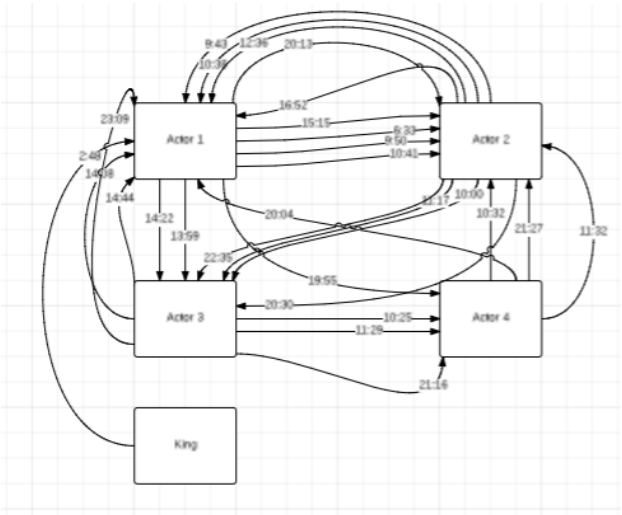


Figure 9. Scene 8: Clean-up & armor

Later on in the scene, no informal leader can be distinguished but the focus is more on the spokesman. One of the actors is the pre-selected spokesman and this actor is, more than in other scenes, responsible for the interaction with the majesty. This is not a problem only when a quarrel occurs, this quarrel occurs in the final minutes of the scene. within this last minutes, hardly no shifts can be observed and the problem of the group (the cause of the quarrel) becomes the problem of the spokesman. He has to inform the majesty.

4.1.9 Ninth scene: Vehicle III

In the ninth and last scene which was analyzed for this research, the assignment is to make a vehicle. In this scene, the actors and their numbers are the same. With help from the figure below the leadership shifts will be showed.

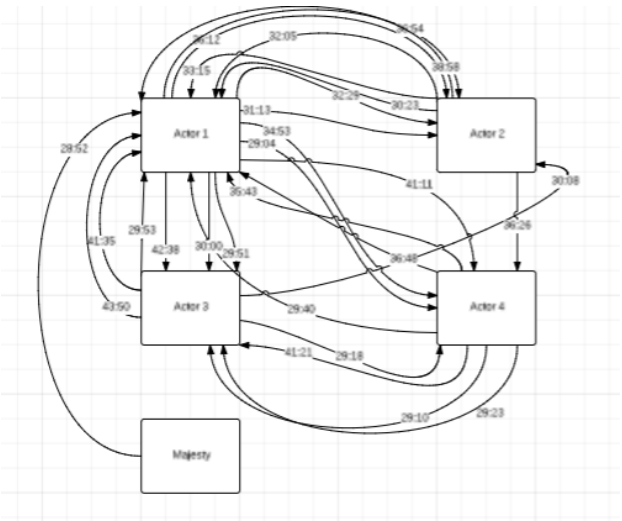


Figure 10. Scene 9: Vehicle III

In this scene, the same actors as in the previous scene are acting. In contrast to the previous scene, within this scene an informal leader is observable (actor 1). A point that is remarkable in this scene is that the decentralized interaction (Wood, 2005) between the actors is not going very fast, the shifts are a bit longer. Shifts from about 30 seconds to 1 minute are no exception.

4.2 Second figure

Within this second paragraph of the data section, the second set of figures will be presented (figure 14 up to 17). In the previous paragraph, the leadership shifts were made visible. In this second paragraph, a second sort of figures will be introduced. For these figures, the same scenes are used. What was aimed with this new figure, is to answer the question 'what do I see?'. In this new structure, it is for example easier to see who the actor with the most shifts is. Within this new figure also the reason why the leadership shifts becomes clear.

Horizontal six columns were made. The first and the last column of the figure contain the reason why the leadership is shifting. The second, third, fourth and fifth column represent the actors. Every actor 'got' one column. When an actor is the leader for a moment, there comes a box below the actor's number. So a box with, for example, 1:25 means that this actor gets the leadership after one minute and 25 seconds. To make the shifts visible, arrows were used. The figure below represents a leadership shift. The arrow between the boxes means that the leadership is shifting to another actor after 1 minute and 32 seconds.

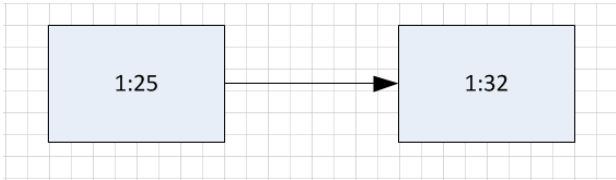


Figure 11. Example I

For this research, the next reasons for a leadership shift are possible:

a) Requested feedback; for example an actor asks 'What do you think?' or 'Is this what we want?'.
b) Unrequested feedback; an actor gives some feedback about what the other(s) is/are doing.
c) Idea; an actor comes up with an idea and that idea is accepted by the other actors.
d) Yes-anding; not only accept each other's ideas, but also support them and enhance them with their own ideas.
e) Division of tasks/ what to do?; one actor tells the other actor(s) what they have to do.
f) Other; other reasons, always explained in the box.

In the figure every arrow gets a striped arrow. This arrows leads to a box with the reason why the leadership is shifting. So when looking to the next figure, the reason that the leadership shifts is because of requested feedback.

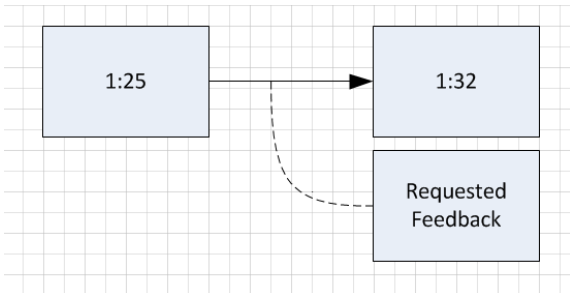


Figure 12. Example II

To prevent an overload of arrows, on both sides of the actor's columns this 'reasons' are represented.

Because the figures are a little bit bigger than the previous ones, these figures are part of the appendix (figure 14, 15, 16 & 17).

For this part of the research, four scenes from paragraph 4.1 were selected. The selected scenes are 4.1.1, 4.1.2, 4.1.8 and 4.1.9. Within the first two scenes, an informal leader gets a central role. This while you would expect a situation of equality (Pina e Cunha et al., 2003). The second couple of scenes is relevant because of the conflict between the actors in scene 4.1.8. In this scene the earlier mentioned risks of rotating leadership can be observed. The last reason that these scenes were selected, is because of the fact that in scene 4.1.1 and scene 4.1.2 and in scene 4.1.8 and scene 4.1.9 the actors are the same.

5. ANALYSIS

The next part of this research is the analysis section. In this section, an answer on the last sub question, 'why does leadership change during the process of organizational improvisation?' (paragraph 1.4) will be provided. To answer this question, the earlier made figures will be used.

5.1 Process aspects

In order to answer the question 'when the leadership shifts?', the scenes were distributed into three parts: the beginning part, the middle part and the last part. When, for example, a scene lasts 12 minutes, the first part is from 0-4 minutes, the second part is from 5-8 and third part is 9-12. To make this visible, red lines were used to make a distribution. In order to make this distribution visible, the red lines are still part of figure 14. Because of the fact that scenes 4.1.1 and 4.1.8 consist out of two smaller scenes and there is also time left between these two parts, the 'cleaning-up' (the assignment of these smaller scenes) part is not considered in the below showed elaboration.

In the table below (see appendix, figure 18), the boxes in the called timespan are counted. After counting the leadership shifts, the conclusion is that the major part of the leadership shifts take place in the beginning part of the innovative process. Exception on this 'rule' is the second scene.

In the beginning part of the scene, the introduction of an idea and the so-called yes-anding are the causes for most of the shifts. By looking at the yellow boxes in the beginning part of the scenes, the conclusion that 22 of the 48 shifts are caused by the introduction of an idea or yes-anding can be drawn.

This can be explained by the moment that the assignment is introduced by the king or majesty. Within this first part, the shifts follow each other faster than in the later part of the scene. Good examples is scene 4.1.7. In the beginning minutes of the scene, the shifts are higher. Every actor presents ideas and reacts on other's ideas. Later in the scene, the actors are working separately and the amount of shifts decrease.

In the middle part of the scene, the leadership shifts are less present. Besides the fact that in most cases the assignment is almost ready, in this part also the intervention of the majesty (or king) can be observed. The majesty or king reacts on how the product looks likes and gives some feedback. Next to the feedback of the majesty or king, in the middle part of the scene also the feedback between actors gets a central role. This can be observed in figure 19. In the last part of the scene, a combination of the earlier mentioned causes can be observed. On the one hand the feedback from the majesty is important. Ideas to fix her complains are introduced (see figure 19, fourth column). Also the completion of the scene and the product are important (see figure 19, first and second column).

5.2 Personal aspects

Besides the process-related aspects as mentioned in the previous paragraph, also personal aspects are important in the question 'how and why is the leadership shifting?'. The leadership shifts cannot be explained by process aspects only. In the table below (figure 20), the leadership shifts per actor in a scene were counted. In this overview also the earlier ignored 'clean-up' scenes are counted. This because time, for this part, does not play a role. This explains the different amount of shifts.

When looking to the first scene (4.1.1), it becomes clear that actor 1 and actor 3 can be observed as leader. The first actor (actor 1) is, especially in the first part of the scene, coordinating the others. This because of the fact he is actively encouraged by the 'film directors' with phrases such as "you take care for participating of every actor" and "you decide when the assignment is done".

Because a few shifts from actor 1 are caused by these 'unnatural' reasons (this actor was pre-selected as spokesman), actor 3 is the informal leader. In the second scene, actor 3 has the most shifts below his name. In this scene his predominance is clear. Again this actor can be seen as the informal leader. In order to explain the fact that actor 3 is the leader, a fourth table is made (figure 21). This table contains the reason why the leadership shifts.

Within this table there is no clear reason why the leadership has shifted to actor 3. The actor is responsible for more 'division of tasks' than the other actors but no hard conclusions can be drawn from this fact. For this two scenes, the conclusion is that the actor's personality gets a big role. Personality has to do with individual differences among people in behavior patterns, cognition and emotion (Mischel et al., 2004). With help from personality, the quantity of shifts from actor 3 can be explained. This can also explain the lower amount of shifts from actor 4. One of the explanations can be the following: Actor 3 can be seen as somewhat extrovert and actor 4 somewhat introvert. For example one of actor 4's quotes has a doubtful start: "Uhm, Guys, I would like…".

In the eighth scene (4.1.8), the differences in the leadership shifts are much smaller. In the last minutes of the scene only a few shifts can be observed. This because of the quarrel between the actors. This would probably not happen when another (for example directive) leadership style was chosen. In the last scene (4.1.9) which was analyzed, actor 1 is responsible for most of the shifts. This person also is the one who was the spokesman of the team and for example introduced the product to the majesty. Where in other scenes (for example 4.1.6 and 4.1.7) every actor tries to make the majesty or king enthusiast for the product, here only actor 1 tries to do this.

Last point that will be elaborated is the moment that an informal leader is chosen. When looking to the first table (figure 18), it becomes clear that the actor who has the most leadership shifts and therefore can be seen as the informal leader, already in this first part of the scene was the actor with the most boxes below his name (scene 4.1.1, 4.1.2 and 4.1.9). So the moment that an informal leader 'stands up' is already in the beginning moments of the scene.

To conclude: in the first two scenes, much more similarities can be observed than in the second pair. Where in scene 4.1.1 and 4.1.2 the informal leader is the same actor, this is not observable in scene 4.1.8 and 4.1.9. In the third scene (4.1.8), there is no informal leader observable. In scene 4.1.8 the spokesman (actor 1) takes the role of informal leader.

So where the actor in scene 4.1.8 uses the function as spokesman to become leader, the actor in scene 4.1.1 and 4.1.2 uses his personality. Examples of this personality are the interruption of someone's idea or by sentences such as "Okay, who is going to…" and asking the other actors to judge an idea from a third actor after positively judging this idea by himself.

6. CONCLUSIONS

The main goal of this research is to deeper investigate the process of rotating leadership within organizational improvisation. The questions 'how is rotating leadership distributed during organizational improvisation?' and 'why does leadership change during the process of organizational improvisation?' got a big role in this research.

To make the process of rotating leadership visible and make it suitable for this research, theatrical simulation was used as research method. The most important finding of this research is the fact that the beginning part of the innovative process the most important part is. This beginning part of the process counts the most leadership shifts of the whole process (figure 18). Not only most of the leadership shifts took place in the beginning part of the scene but these shifts were also important for the creative aspect of the assignment. This because of the fact that most of those shifts were for the major part caused by an idea or yes-anding. This can be explained by the introduction of the assignment. After the introduction, the actors immediately start dropping ideas. The actors also start accepting and reacting on each other's ideas, this process is better known as yes-anding (Crossan, 1998).

In the middle part of the scene, the actors are more and more focused on their own tasks and their own expertise. For this reason the amount of shifts decreased. In the final part of the scene, there can be distinguished two different processes. On the one hand the team handles the feedback from the majesty or king and the actors come up with new or revised ideas to satisfy the wishes from the majesty. On the other hand, the actors are in the last stage of the product development. The introduction of ideas is now replaced by the providing of feedback in order to improve and finish the developed product.

Because there is no central or pre-selected leader and only a pre-selected spokesman, there is space for an informal leader. In the first, second and ninth scene, there is one actor with the highest amount of shifts. This actor already in the first part of the scene has the highest amount of shifts. So the informal leader of the scene 'raises' early in the innovative process. This informal leader is not formally chosen but no specific reason for the choice can be observed. This is elaborated in figure 21. The conclusion is that the central role of the informal leader is mainly caused by the personality of the actors or by the fact that one of the actor is designated as spokesman. In scene 4.1.8 no informal leader can be observed. In particular within the last minutes where one of the risks of rotating leadership occurs. The spokesman made a mistake and now is enforced to solve this mistake.

7. DISCUSSION

This research is useful for better implicate rotating leadership in new product development teams. Earlier research found that one of the main characteristics of rotating leadership: 'leadership is the responsibility of the whole group' (Pearce et al., 2010), makes implication more difficult. This claim is confirmed by this research. Within the implication of rotating leadership, many objects should be taken into account.

First the personality of the actors plays a big role. For example, Carson et al. (2007) called this phenomenon 'voice' in his research. This personality can also have a negative influence on the results the new product development (NPD) team achieved. When for example the interaction is continuously between two actors, this will not improve the achievement of the team and this also counter the principal of equality within rotating leadership (Pina e Cunha et al., 2003). But in most of the scenes which were analyzed for this research (3 out of 4, only 4.1.8 not), an informal leader got a central role in the product development process. So the equality mentioned in Pina e Cunha et al. (2003), does not always exists in rotating leadership.

Second is the quality of team work. Where earlier research concluded that the introduction of rotating leadership leads to more and better team work (Van Bilsen, 2010), the quality of this team work can possibly decrease when different personalities are bound together, when the social support is missing or this support is only between two actors (Wood, 2005). An example is the interaction between actor 2 and 3 in scene 4.1.5. Here the major part of the shifts are between actor 2 and 3, the other two actors are excluded at these moments and does not play a big role in the creative and innovative process (figure 6).

A founding which was not part of earlier research is the importance of the different parts of the innovative process. Figure 18 offers an overview about the shifts in the different parts of the scenes. The conclusion was that the beginning part of the scene is the most important part of the scene for the innovative process. Within this part the actors introduce ideas and react on each other's ideas. Also the informal leader stands-up in this beginning part.

The last point for improvement of rotating leadership is about the selection of a spokesman. What is observable in scene 4.1.8 and 4.1.9, is that the selection of a spokesman has an advantage and a disadvantage. The spokesman is responsible for the introduction of the assignment, the beginning moments of the innovative process and the communication to the majesty but on the other hand also has to handle the moments that nobody takes the leadership or in case of a quarrel (scene 4.1.8). So for the other actors, there is no reason to 'fix' the quarrel because this spokesman has to present the product to the majesty and, from that moment on, it is his problem. But this problem was only observable in the last scene. So with the introduction of a spokesman, certain risks are involved.

8. RECOMMONDATIONS

To elaborate this research subject in a broader and deeper way, it would be value added to do the deeper investigate servant leadership and directive leadership in the same way. Next to this it would also be interesting to deeper investigate the role of personality. This by, for example, put actors with the same personality in one team. This could be reached by letting the actors first doing a personality test.

9. LIMITATIONS

A limitation to this research is subjectivity, in methodology terms also called observer bias. Within this research, it was tried to work with clear and sharp definitions. An example of this is the introduction of examples in chapter 3.1. But despite the fact clear definitions were used, it cannot be excluded that other researchers have other opinions about the definitions or the outcomes. Second point is the research method which was used for this research. In this research theatrical simulation was used as research method. Different researches confirm that this method gives an objective view of the reality (Wagenaar, 2008; Van Bilsen, 2010). Still it is always better to test these hypotheses with real new product development (NPD) teams in controlled testing environments as well.

10. ACKNOWLEDGMENTS

This research would not be the same without the help from my supervisors. Thanks goes to my first supervisor, K. Visscher, for his critical thoughts and input, my second supervisor, M. Ehrenhard, for reading along. Thanks also goes to Gijs van Bilsen for providing me his data and feedback. In the last place thanks goes to Mathijn Kok for supporting me with some software-related issues.

11. REFERENCES

Akgün, A. E., Byrne, J. C., Lynn, G. S., & Keskin, H. (2007). New product development in turbulent environments: Impact of improvisation and unlearning on new product performance. *Journal of Engineering and technology Management*, *24*(3), 203-230.

Amabile, T. M. (1998). *How to kill creativity* (pp. 77-87). Harvard Business School Publishing.

Bass, B., *Bass & Stogdill's handbook of leadership*. New York: The Free Press. 1990.

Bastien, D. T., & Hostager, T. J. (1988). Jazz as a process of organizational innovation. *Communication Research*, *15*(5), 582-602.

Bilsen, G. (2010). Leading organizational improvisiation: an exploration of the influence of leadership style on organizational improvisation.

Cameron, K. S., & Quinn, R. E. (1988). *Organizational paradox and transformation*. Ballinger Publishing Co/Harper & Row Publishers.

Carson, J. B., Tesluk, P. E., & Marrone, J. A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of management Journal*, *50*(5), 1217-1234.

Clegg, S., Kornberger, M., & Rhodes, C. (2007). Business ethics as practice. *British Journal of Management*, *18*(2), 107-122.

Clegg, S. R., da Cunha, J. V., & e Cunha, M. P. (2002). Management paradoxes: A relational view. *Human Relations*, *55*(5), 483-503.

Craig, A., & Hart, S. (1992). Where to now in new product development research?. *European Journal of Marketing*, *26*(11), 2-49.

Crossan, M. M. (1998). Improvisation in action. *Organization Science*, *9*(5), 593-599.

Crossan, M. M., Lane, H. W., White, R. E., & Klus, L. (1996). The improvising organization: Where planning meets opportunity. *Organizational Dynamics*,*24*(4), 20-35.

Davis, J. P., & Eisenhardt, K. M. (2011). Rotating Leadership and Collaborative Innovation Recombination Processes in Symbiotic Relationships. *Administrative Science Quarterly*, *56*(2), 159-201.

Denehy, J. (2008). Leadership characteristics. *The Journal of School Nursing*,*24*(3), 107-110.

Eisenhardt, K. M., & Tabrizi, B. N. (1995). Accelerating adaptive processes: Product innovation in the global computer industry. *Administrative science quarterly*, *40*(1).

Gastil, J. (1994). A definition and illustration of democratic leadership. *Human Relations*, *47*(8), 953-975.

Graham, J. W. (1991). Servant-leadership in organizations: Inspirational and moral. *The Leadership Quarterly*, *2*(2), 105-119.

Greenleaf, R. (1970). "The servant as leader." Center for Applied Studies.

Greenleaf, R. (1977). Servant leadership: a journey into the nature of legitimate power and greatness. *New York: Paulist Press*, *1991*(2002), 359.

Hartmann, S. (1996). The world as a process. In *Modelling and simulation in the social sciences from the philosophy of science point of view* (pp. 77-100). Springer Netherlands.

Hatch, M. J. (1996). The Role of the Researcher An Analysis of Narrative Position in Organization Theory. *Journal of Management Inquiry*, *5*(4), 359-374.

Inbar, M., & Stoll, C. S. (1972). *Simulation and gaming in social science*. Free Press.

Koen, P., Ajamian, G., Burkart, R., Clamen, A., Davidson, J., D'Amore, R., ... & Wagner, K. (2001). Providing clarity and a common language to the" fuzzy front end". *Research-Technology Management*, *44*(2), 46-55.

Kort, E. D. (2008). What, after all, is leadership? 'Leadership' and plural action. *The Leadership Quarterly*, *19*(4), 409-425.

Mischel W., Shoda Y., Smith RE., 2004. *Introduction to personality: Toward an integration.* New York: Wiley

Moorman, C., & Miner, A. S. (1998). The convergence of planning and execution: improvisation in new product development. *The Journal of Marketing*, 1-20.

Pearce, C. L., Elisabeth Hoch, J., Jeppe Jeppesen, H., & Wegge, J. (2010). New forms of management: Shared and distributed leadership in organizations.

Pina e Cunha, M., Kamoche, K., & Campos e Cunha, R. (2003). Organizational improvisation and leadership: A field study in two computer-mediated settings. *International studies of management & organization*, 34-57.

Pina e Cunha, M., Vieira da Cunha, J., & Kamoche, K. (1999). Organizational improvisation: What, when, how and why. *International Journal of Management Reviews*, *1*(3), 299-341.

Ringstrom, P. A. (2001). "Yes, and…"—How improvisation is the essence of good psychoanalytic dialogue: Reply to commentaries. *Psychoanalytic Dialogues*, *11*(5), 797-806.

Sivasubramaniam, N., Liebowitz, S. J., & Lackman, C. L. (2012). Determinants of New Product Development Team Performance: A Meta-analytic Review. Journal of Product Innovation Management, 29(5), 803-820.

Vera, D., & Crossan, M. (2004). Theatrical improvisation: Lessons for organizations. *Organization Studies*, *25*(5), 727-749.

Vera, D., & Rodriguez-Lopez, A. (2007). Leading Improvisation: Lessons from the American Revolution. *Organizational Dynamics*, *36*(3), 303-319.

Wagenaar, M. (2008). Simulatie in de filosofie. *Philosophy of Science, Technology and Society. Enschede, University of Twente*.

Weick, K. E. (1995). Creativity and the aesthetics of imperfection. *Creative action in organizations*, 187-192.

Wood, M. S. (2005). Determinants of shared leadership in management teams. *International Journal of Leadership Studies*, *1*(1), 64-85.

Zack, M. H. (2000). Jazz improvisation and organizing: Once more from the top. *Organization Science*, *11*(2), 227-234.

12. APPENDIX

The appendixes consist out of (1) one bigger image of the figures which were made in the fourth chapter, (2) diagram view of the leadership shifts with explanation, (3) the tables belonging to the analysis section and (4) one paper sheet in order to make the coding process visible.

12.1 Appendix I

An enlarged copy of the figure from paragraph 4.1.1.

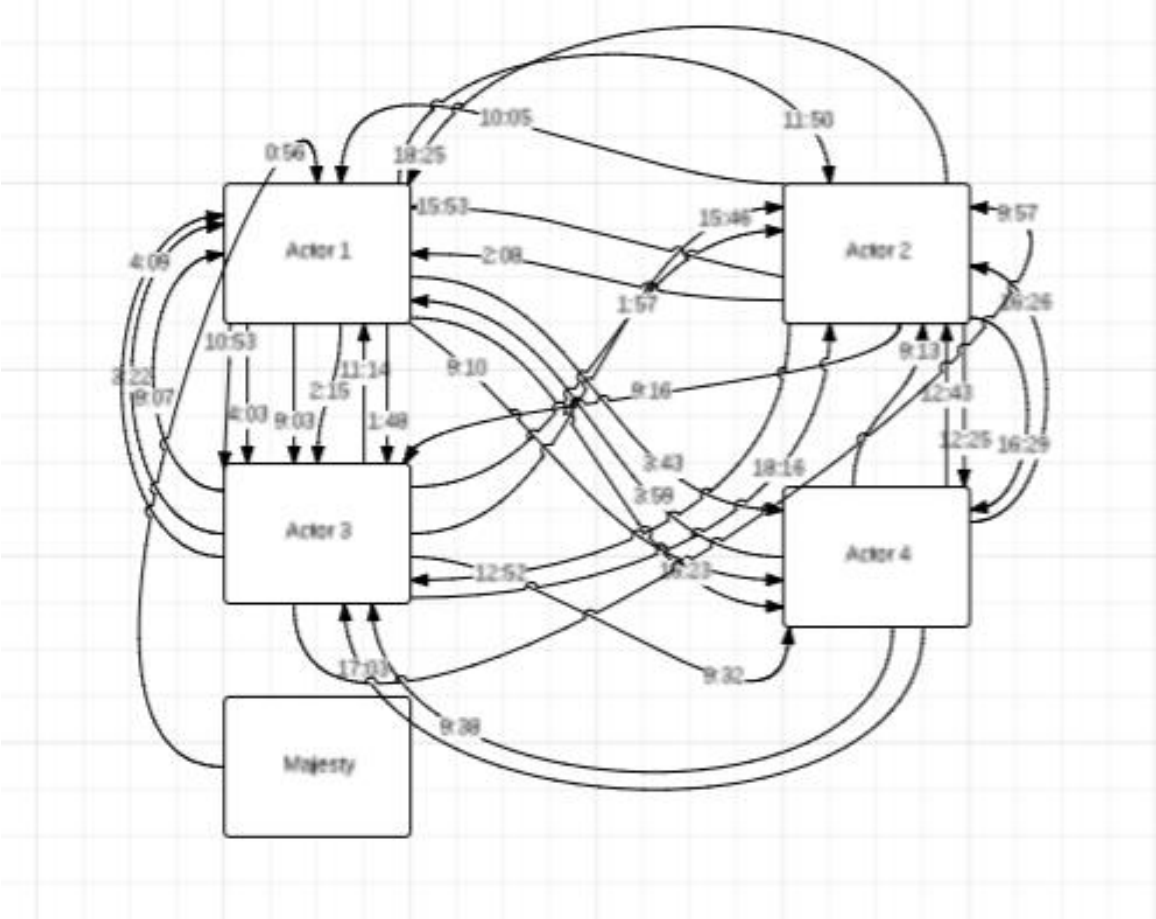


Figure 13. Bigger image of scene 4.1.1

12.2 Appendix II

Below the time diagram of the first scene. An arrow from one actor to another actor means that the leadership is shifting to that actor. The arrow from above represent the beginning moment of the scene, the moment that one of the actors takes over the leadership from the majesty. The time in the box stands for the moment he gets the leadership. So, for example actor 1 gets at 0:56 the leadership from the majesty and 'gives' the leadership to actor 3 at 1:48. The striped arrow between 0:56 and 1:48 means that this shift is caused by unrequested feedback.

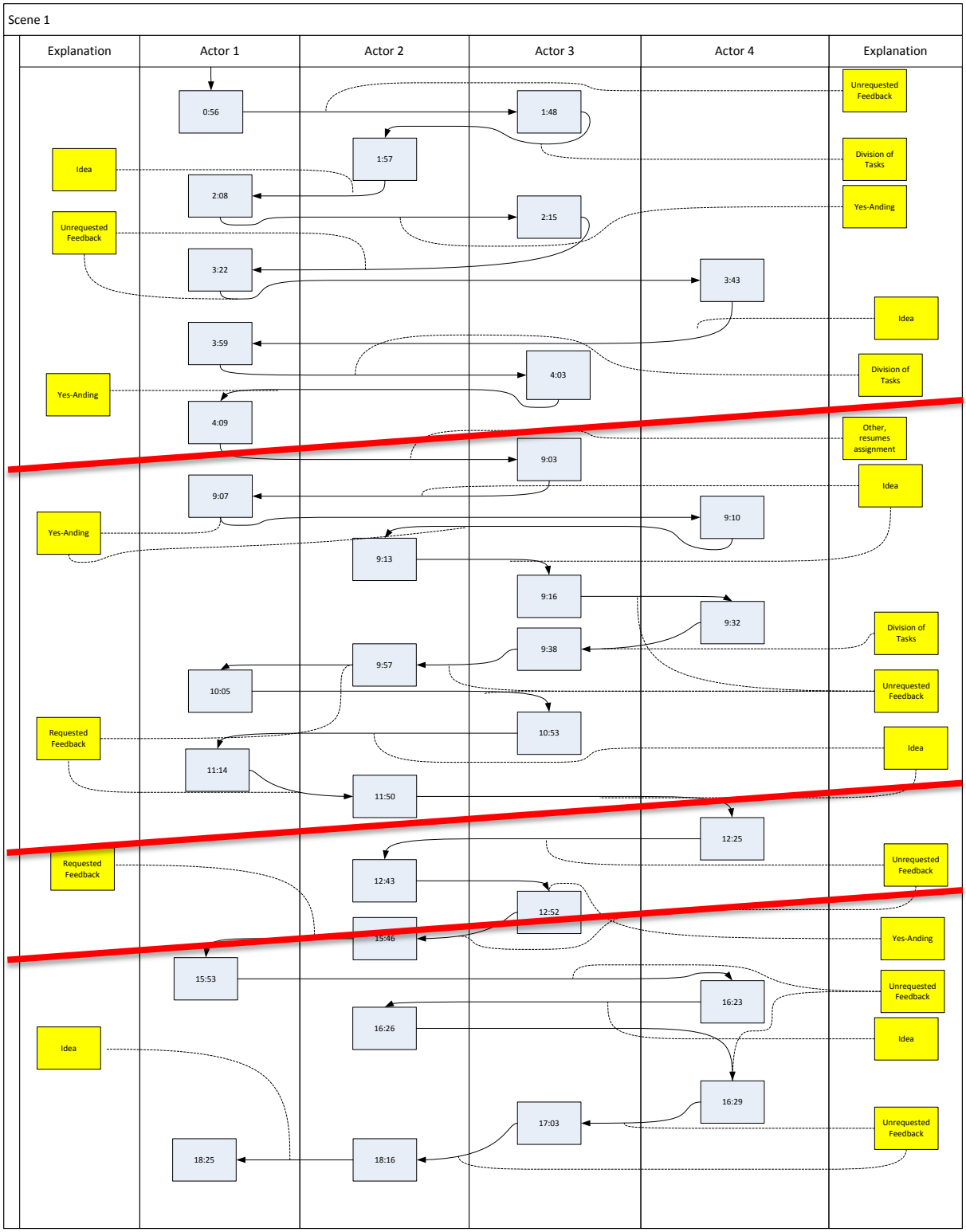


Figure 14. Scene 4.1.1

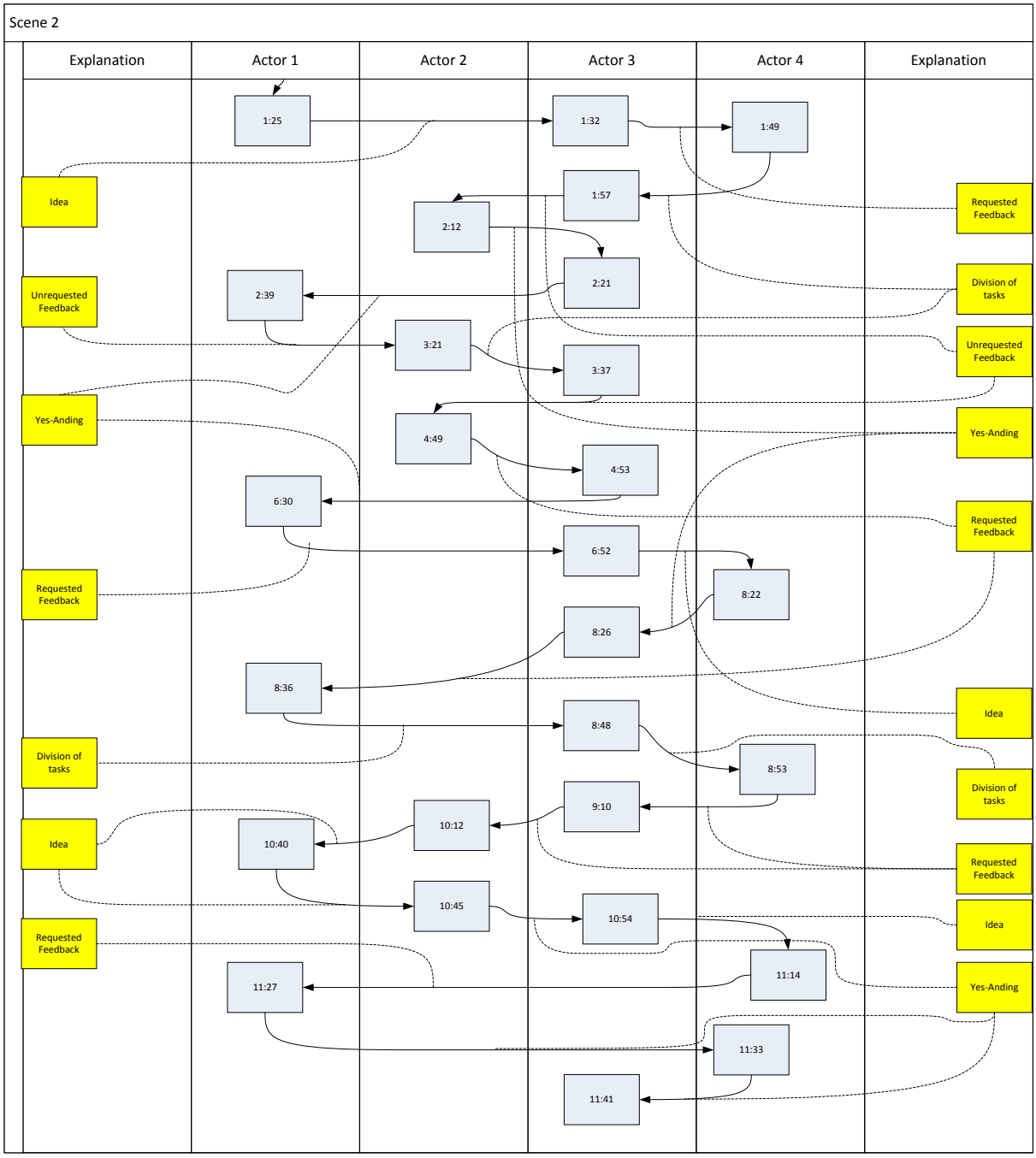


Figure 15. Scene 4.1.2

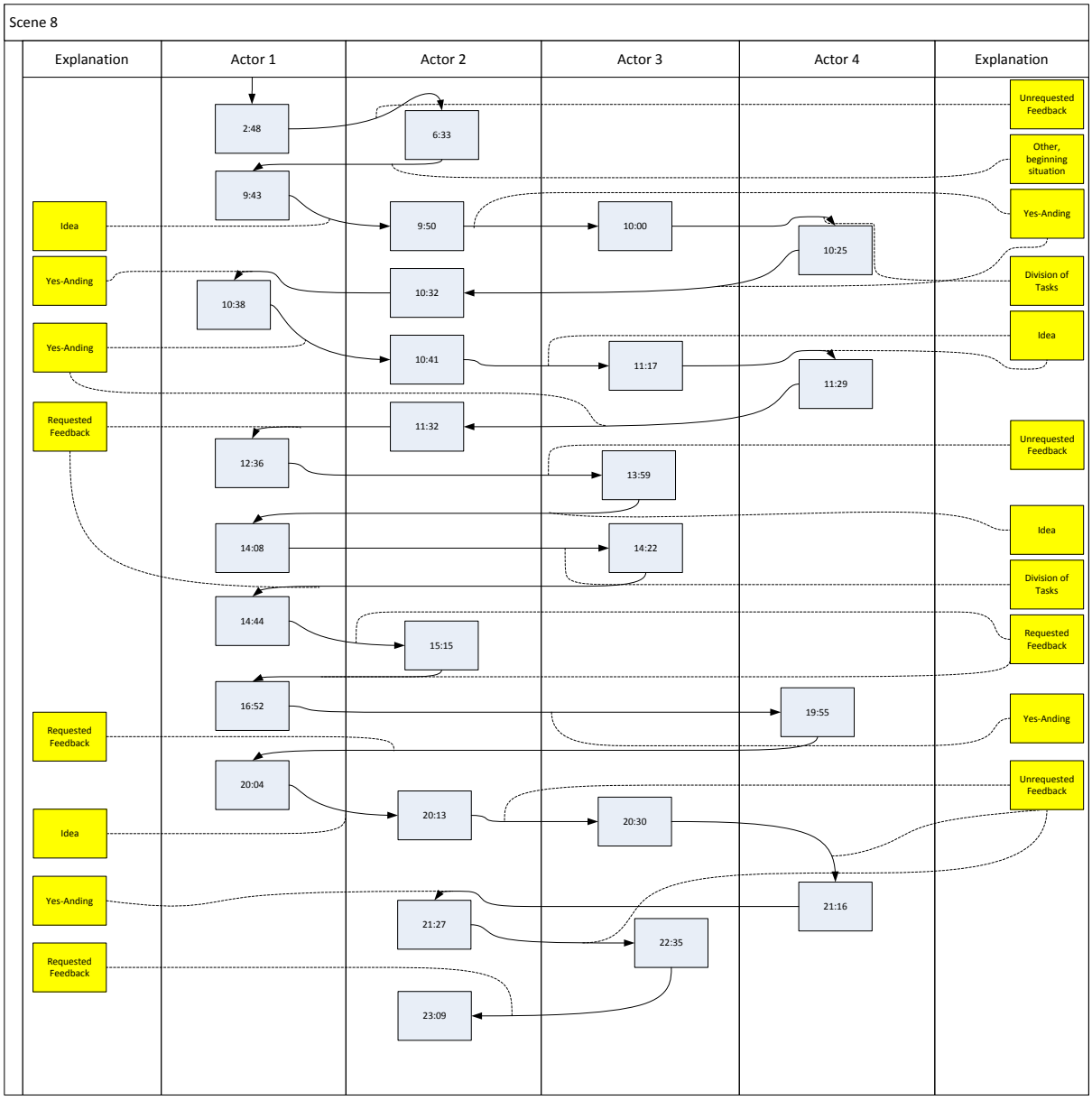


Figure 16. Scene 4.1.8

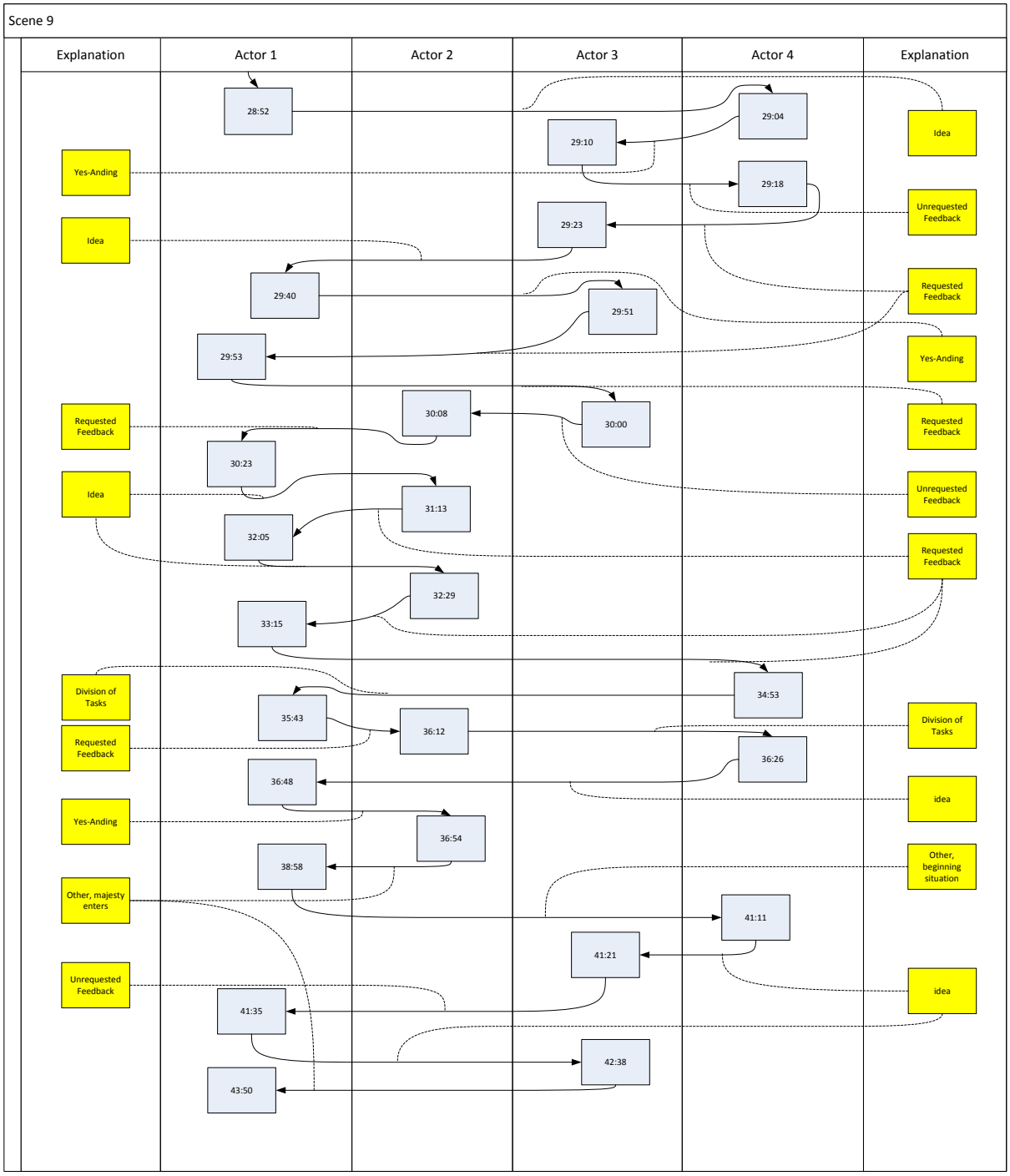


Figure 17. Scene 4.1.9

12.3 Appendix III

# of shifts	# in beginning part					# in middle part					# in last part					# in total
Actor #	#1	#2	#3	#4	Total	#1	#2	#3	#4	Tot.	#1	#2	#3	#4	Tot.	
Scene 4.1.1	3	3	4	2	12	0	1	1	1	3	2	3	1	2	8	23
Scene 4.1.2	2	2	4	1	9	1	1	2	0	4	3	2	5	4	14	27
Scene 4.1.8	3	4	3	2	12	3	1	1	0	5	1	3	2	2	8	25
Scene 4.1.9	6	3	4	2	15	2	2	0	2	6	3	0	2	1	6	27
Total					48					18					36	102

Figure 18. Table I

Reason / Part	Requested feedback	Unrequested feedback	Idea	Yes-anding	Division of tasks	Other;	Total
Beginning part	10	8	11	11	4	4	48
Middle part	7	3	3	2	3	0	18
Final part	7	9	11	4	2	3	36
Total	24	20	25	17	9	7	102

Figure 19. Table II

	Actor 1	Actor 2	Actor 3	Actor 4	Total
Scene 4.1.1	10	8	9	6	33
Scene 4.1.2	6	5	11	5	27
Scene 4.1.8	8	9	6	4	27
Scene 4.1.9	11	5	6	5	27

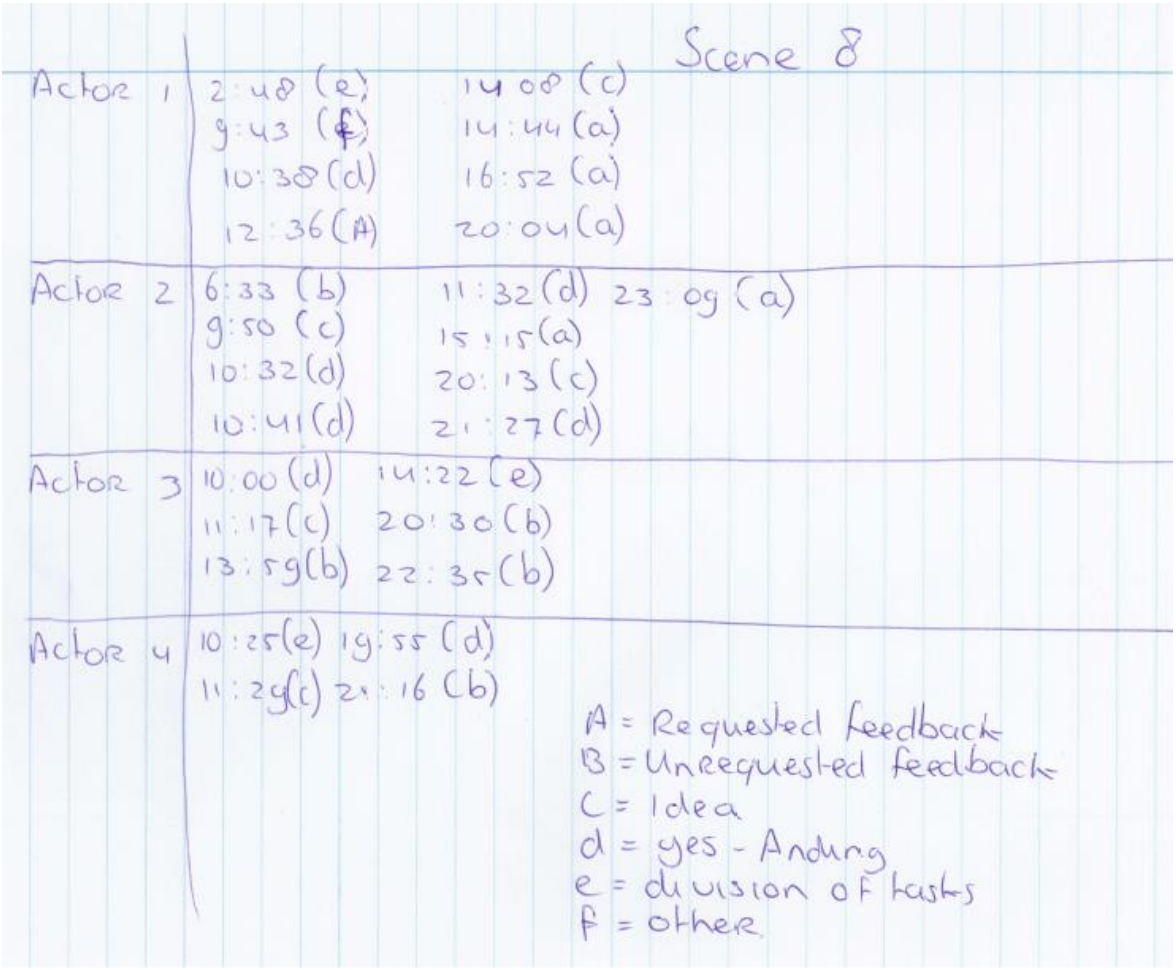
Figure 20. Table III

Reason / Scene	Requested feedback	Unrequested feedback	Idea	Yes-anding	Division of tasks	Other;	Total
Scene 4.1.1	0	3	1	2	2	1	9
Scene 4.1.2	3	0	1	4	3	0	11

Figure 21. Table IV

12.4 Appendix IV

The last appendix is one paper sheet in order to make the coding process visible. Behind the number of the actor, the numbers show the moment when the shift is observable. Behind this moment a letter shows the reason of the shifts. Those reasons are stated below. Below scene 4.1.8 is represented.



Scene 8

Actor 1	2:48 (e) 9:43 (f) 10:38 (d) 12:36 (A)	14:08 (c) 14:44 (a) 16:52 (a) 20:04 (a)
Actor 2	6:33 (b) 9:50 (c) 10:32 (d) 10:41 (d)	11:32 (d) 23:09 (a) 15:15 (a) 20:13 (c) 21:27 (d)
Actor 3	10:00 (d) 11:17 (c) 13:59 (b)	14:22 (e) 20:30 (b) 22:35 (b)
Actor 4	10:25 (e) 11:29 (c)	19:55 (d) 21:16 (b)

A = Requested feedback
B = Unrequested feedback
C = Idea
d = yes - Anding
e = division of tasks
f = other

Figure 22. Coding sheet