

Attributions by Team Members for Team Outcomes in Finnish Working Life

Maarit Valo and Pertti Hurme

Abstract—This study focuses on teamwork in Finnish working life. Through a wide cross-section of teams the study examines the causes to which team members attribute the outcomes of their teams. Qualitative data was collected from 314 respondents. They wrote 616 stories to describe memorable experiences of success and failure in teamwork. The stories revealed 1930 explanations. The findings indicate that both favorable and unfavorable team outcomes are perceived as being caused by the characteristics of team members, relationships between members, team communication, team structure, team goals, team leadership, and external forces. The types represent different attribution levels in the context of organizational teamwork.

Keywords—Team, teamwork, team outcomes, workplace, working life.

I. INTRODUCTION

IN modern organizations it is common to work in various kinds of teams and small groups. Effective teamwork is needed not only in professional knowledge-intensive work but also in a variety of other occupations. In Finland, as in all of Scandinavia, teamwork is even more general than in other parts of the world. In Finland, Denmark and Sweden teamwork has a long tradition, and in these countries the development of teamwork – at one time a new form of work – has been supported by government policy [1]. In 2004, 81% of Finnish employees reported that teamwork is used in their workplace [2], and according to the European Working Conditions Survey [3], 74% of Finnish wage and salary earners work in a team. The rationale is that successful teaming makes for successful organizations and leads to economic prosperity.

However, research on experiences of teamwork in Finland shows that in 2008, satisfaction with teamwork has declined when compared with the survey results of 2003 [4]. Although team or group work has become more common for both men and women in Finland from 2003 to 2008, fewer of those working in teams are satisfied with their teams or the way in which they can participate in team decision-making. In addition, fewer of team workers report that teams increase work productivity or promote equal distribution of work tasks.

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Teams and groups have been studied from a variety of perspectives and theoretical positions (for reviews of different perspectives, see [5]–[8]). Research has largely focused on team outcomes and shown that the quality of team and group outcomes and effectiveness are conditional on a large number of factors. In a research review on team effectiveness [9] the following factors were distinguished as key variables in team effectiveness: type of team, group composition, organizational and environmental factors, internal and external processes, and group psychosocial traits. Complex relationships prevail between the context, structure, processes and outcomes of teams; however, the salient aspects in successful teamwork have been found to be, for example, collaboration, conflict resolution, participation, and cohesion [10]. Factors related to leadership [11], goals [12]–[13] and group size [14] have been found important. Team members' mental and cognitive characteristics, such as information processing and sharing or team-level reflexivity [15], cognitive similarities [16], shared mental models [17] as well as shared work values [18] are also factors relevant to good teaming. Among the pertinent personal traits and characteristics are, for example, self-construal [19], conscientiousness [20] and expertise [21]. Team atmosphere [22], complementary competences [23], information accessibility and knowledge management [24], conflict management [25], democracy and whether or not it is possible to participate in decision-making [26] are also major determinants in team outcomes. Further communicative factors related to successful teams are interaction processes [27], in-group relationships [28], interpersonal sense-making mechanisms [29], relevant teamwork knowledge [30], and communication skills [31].

The abundant research findings on team outcomes are still fragmentary as they considerably depend on the context – the types, functions and goals of organizations and teams – in which the studies have been conducted. Short-term temporary groups have sometimes been used as research subjects and university students as testees. In the research area of small groups and teams there is a bias toward laboratory experimentation [32]. It is vitally important to examine the outcomes of actual teamwork in real organizations, on the basis of team members' own perceptions and experiences. The working life is also in dire need of adapting research results to everyday work.

II. GOAL OF THE STUDY

In the present article the team context is Finnish working

life. We focus on people from a large number of professions and occupations who work in real teams in real workplaces. We wanted to examine a wide-ranging cross-section of working life. This is why the study addresses teams both in professional, knowledge-intensive work and in more practical but skilled work. By team we refer to small groups of employees or workers who are engaged together in accomplishing their work goals and who depend on each other for the accomplishment of these goals.

The purpose of the present qualitative study is to find out the factors which team members use and through which they interpret the outcomes of their teams. To what causes do team members attribute their successful and unsuccessful teams? How do they characterize these causes? In qualitative research the goal is often to study things in their natural settings, to gain a rich description of the social world from individuals' point of view, based on these individuals' lived experiences. The aim is to make sense of phenomena in terms of the meanings people attach to them. [33] In the present study the focus is not on differences or similarities between individual respondents, their occupations or their working contexts. Instead, the goal is to understand teams' social world: team members' lived experiences from successful and unsuccessful teams, and the factors to which the members attribute their experiences.

Research on team members' own interpretations of team outcomes appears to be lacking. It is true that the satisfaction that individual team members derive from teamwork has been shown to have substantial effects on team outcomes [20], [34]–[35]. However, we do not know yet on what grounds and through what dimensions members evaluate the performance of their teams. What gives rise to satisfaction – or conversely, dissatisfaction – to members, in their own words? For any organization wishing to achieve optimal team outcomes it is important to have an understanding of the nature of teamwork from the perspective of their employees as team members.

III. BACKGROUND

In research of team outcomes the findings are dependent on the operationalization and measures of team outcomes. Who evaluates the results of teamwork and reasons to them, and on which criteria? It has been shown [36] that there can be a perceptual distance between teams and their leaders regarding, for example, goal accomplishment of the team. Substantial differences in leaders' and members' evaluations may have effects on actual team performance.

The reasons for interpreting and evaluating outcomes of teamwork can be examined in the framework of attribution theories. The original attribution theory by Heider [37] looked at causal explanations – mostly individual attributional biases – in associating events and their causes. He divided attributions into internal attributions (where the cause is dispositional, i.e. within the actor or perceiver) and external attributions (where the cause is situational, i.e. an outside factor). (See also [38]–[39].) Wallace and Hinsz [40] review

the infrequent studies, which have focused on group attributions. So far, the studies have shown that groups use both internal and external attributions for their group performance. However, such studies have often used sport teams, professional athletes and coaches as well as experimentally composed groups as subjects and therefore the findings are not readily applicable to working life teams.

Research on external and internal attributions for team outcomes would certainly have relevance in the working life context. However, such a dichotomy may not fully reveal the variety of reasons to which team members attribute successes and failures of their teams. Research on teamwork effectiveness and outcomes as perceived by team members should make use of their own experiences and interpretations. There is an evident need for qualitative analyzes of authentic perceptions of team members.

Qualitative methods have been used by Hirokawa and his colleagues in an influential series of studies [41]–[42]. They have examined team members' perceptions of factors affecting team effectiveness in several studies. Using data from organizational team members, Hirokawa and Keyton [41] found that compatible work schedules, group members' motivation, adequate informational resources, competent group leadership, and organizational assistance are factors that team members believe facilitate their teamwork. Hirokawa, DeGooyer and Valde [42] collected written stories from members of various actual groups. Stories about group success and group failure revealed seven themes that participants perceived as affecting group performance: relationships, group structure, group processes, members' emotions, group communication, member attributes, and external forces. However, 27% of their data consisted of sport teams. There is a need for further research analyzing team members' own experiences and interpretations in the area of organizational teamwork and actual working-life teams.

IV. PROCEDURE

A. Data Collection

The present study has a qualitative approach to attributions by team members. As the focus is on team members' own interpretations of the reasons of their team outcomes, descriptive and reflective data from members was needed. We chose to collect stories from team members in actual working life. According to Clandinin and Connelly [43] and Jensen [44], stories can be used in qualitative research as written, reflected representations of actions, situations or processes that usually have a structure, with sequences of perceived events, reasons, outcomes, and an ending. Stories can serve as personal constructs of social reality in teams, sorted out and drawn together in a meaningful way by respondents.

Following the procedure of Hirokawa et al. [42], written stories were elicited from respondents. The respondents were selected into a purposive sample; this sampling method is almost exclusively used in qualitative research [45]–[46]. Students of communication in a Finnish university assisted in

the data collection, which was integrated into the students' course work. The students were instructed to turn to their own personal networks and ask stories from their parents, relatives, acquaintances and friends who were then working or had earlier worked either permanently or temporarily in a team. Thus, the stories came from respondents in actual workplaces. Care was taken not to collect stories from student groups, sports teams, interest clubs or voluntary work. The students collected three stories each.

The assisting students gave a simple questionnaire (adapted from [42]) to their respondents, who were all working at Finnish workplaces. The respondents were first asked to indicate their sex, age and occupation or profession. They were then asked to think of two memorable experiences of a work team in which they were or had earlier been members: firstly, a memorable experience of success in teamwork, and secondly, one of failure in teamwork. The request for two different stories was designed to obtain as wide a range of qualitative data as possible, to reveal the full extent of explanations (attributions) put forward for team outcomes (success or failure) by team members. The respondents were asked to write two stories or descriptions on separate pieces of paper. If they were unable to come up with two stories, they only wrote one. They were told to describe the success/failure through the following questions: what kind of a team or group it was, in what ways the team was successful/unsuccessful, what made the team successful/unsuccessful, and the causes for the success/failure. They were encouraged to write in as much detail as possible.

In all, there were 314 respondents (211 female and 103 male), with an average age of 35 years (range from 21 to 61). The occupation or profession of the respondents was very varied. Examples include nurse, paper mill worker, school principal, police officer, social worker, foreman, biologist, kitchen maid, salesperson, kindergarten teacher, farmer, journalist, bank employee, physician, youth work counselor, project manager, building contractor, librarian, croupier, bus driver, production manager, restaurant worker, hair-dresser, veterinarian, painter, pharmacist, and carpenter.

The work duties and tasks within which respondents described the success or failure of their teams were equally varied. Examples include repairing an engine, menu planning, conference organization, crisis management, planning road repairs, computer programming, curriculum planning, patient reception, first aid in downhill racing, writing music for a pop band, organizing a class trip, welding, peace-keeping abroad, drug control, a pizzeria, house renovation, a petrol station, television production, cleaning, maintenance of a telecommunications network, organizing an equestrian competition, personnel management and development, clearing snow with a snow plough, organizing a taxi service, a hardware store, and ship design. The stories showed a variety of work activities: both intellectual performances (such as negotiation, decision making, process evaluation, division of work, planning future activities, leadership, management) and more concrete actions (such as construction work, cooking,

selling).

In all, the data consist of 616 written stories collected from the respondents. The data include 314 success stories and 302 failure stories.

B. Data Analysis

The first phase of data analysis was to identify the causes of success and failure in teamwork put forward in the written stories. In the qualitative analysis of textual data it is essential to identify the basic units from the text by close reading, and to decide the criteria on which the unit can be identified (see e.g. [46]). Content analysis was applied where *cause* was the basic unit. Cause was defined as an expression of any explanation, reason, ground, motive, feature, aspect, characteristic or other factor that the writer perceived as having caused, led, contributed to or helped the outcomes of the team. As a basic unit in text, cause could be anything from one word to a substantially longer description of the team or the process it went through. Causes consisting of only one word included, for example, 'openness', 'honesty', 'equality', 'tiredness', 'envy', 'conflicts'. These were usually given in a list of causes. A typical story could include three causes, as in the following: "we succeeded because we had *experience in working together*, *motivation*, and even some *luck*". However, usually the description of a cause was substantially longer; the respondents gave detailed reports, narrations and illustrations. Examples of longer descriptions of causes will be presented in the Findings chapter.

Extracting the basic units (the causes for favorable or unfavorable team outcomes) was not always easy. Especially the borderline between a trait (feature, characteristic, event) of a team (what were the characteristics of a successful/unsuccessful team) and a cause (explanation, reason, incentive) of the success/failure (what were the causes of the success/failure) was sometimes fuzzy. The writing could go back and forth between traits and causes. Hirokawa et al. [42] point out that, for example, an interpersonal conflict may be either a cause or a symptom of ineffective group performance. Conflicts may cause a group to fail, but the experience of failing may also cause members to argue and fight with each other. In the present study close attention was given to this problem. The analysis was carried out with the help of a trained research assistant with an M.A. in Organizational Communication. The assistant first read all the stories and identified the causes in every story. Then the two researchers went through the preliminary version of the analysis, and ambiguous items were discussed and resolved. All the causes were written into a spreadsheet, preserving their connections to the individual respondents.

In a qualitative study the focus is not on quantities. However, to describe the present data we give the relevant numbers: 1930 separate basic units, i.e. causes of success or failure, were identified from the stories. On the whole, there were more causes of success than of failure (1104 vs. 826). On average, one story contained 3.1 attributed causes (success stories 3.5 causes and failure stories 2.7 causes). There were

neither negative causal statements in the success stories nor positive causal statements in failure stories.

The second phase of the data analysis was to categorize the causes given. As the basis of the categorization we took the framework presented by Hirokawa et al. [42]. However, the categories in their framework did not lend themselves satisfactorily to the Finnish data. As the categorization progressed through sequential phases, the coding system began to significantly diverge from the basic framework. While some of their categories proved to be well suited, others turned out to be useless, and several new classes had to be formed. In the end, the categorization process followed a typical process of qualitative data analysis (content analysis) from preliminary descriptive categories to a hierarchical classification structure with categories of lower and higher levels (see e.g. [45]). The two researchers carried out the preliminary categorization, in which the tentative groups of causes were constructed. Then, the preliminary categorization of the whole data was performed by the research assistant, who had been familiarized with the coding system. She put aside a number of unclear cases that were then jointly discussed and either included or excluded. Finally the two researchers went through the contents of each category. As always in qualitative research, the boundaries of categories, especially subcategories, remain open to various interpretations. As in extracting the units, also in their classification we progressed through several stages and in the end the members of the research team were unanimous in their decisions.

Throughout the whole analyzing process the stories of success and failure – and the basic units in them – were kept separated. However, it was soon discovered that the basic units (causes) in success and failure descriptions could mostly be classified in the same main categories. For example, high motivation was mentioned as a cause for success, and low motivation as a cause for failure; knowledge was perceived as a reason for success and lack of knowledge as a reason for failure. Contents in all main categories (representing main types of causes) could be classified further into more elementary categories, which can be called subtypes of causes. Also in this further categorization we benefited from the framework used by Hirokawa et al. [42]. The completed coding system of the present data contains 33 categories. In the following chapter, the findings are described through main types and their subtypes.

V. FINDINGS

The qualitative data proved to be a rich collection of team members' vivid experiences. The findings indicate that success and failure in teamwork are attributed to a wide range of causes. The causes could be analyzed into seven main types: member characteristics, relationships between team members, team communication, team structure, team goals, team leadership, and external forces. The types of attributed causes of success and failure are shown in Table 1. It also

gives the subtypes of each main type of causes.

Table 1 shows that almost every subtype has two manifestations: positive in a success story and negative in a failure story. However, the following subtypes were associated only with team success: positive emotions of members, support, monitoring of activities, complementary competences, and inspiring challenges. Respectively, the following subtypes were mentioned only as factors for team failure: selfishness, tiredness and stress, overconfidence and arrogance, conflict, power play, neglect of essential tasks, and fate.

In this chapter the findings are presented for each cause given for success and failure. All the main types and subtypes – containing at least one attributed cause for team outcomes – are examined in detail below. The rich data is a source of both identifying the cause types and demonstrating what these causes mean to those working in teams.

Excerpts from the stories are given to illustrate the types of causes. The examples have been selected on the basis of their typicality. The excerpts have been translated from Finnish by the second author. The number in parentheses preceded by # indicates the respondent. The letters s and f indicate cause for success and cause for failure.

A. Member Characteristics

Causes connected to the individual characteristics of team members are the first main type of causes given for successes and failures in teams. Seven subtypes of reasons for success or failure emerge in this category: members' (1) motivational factors, (2) knowledge and experience, (3) responsibility or irresponsibility, (4) selfishness, (5) tiredness and stress, (6) overconfidence and arrogance, (7) positive emotions.

Motivational factors are highly significant in any group or team, both successful and unsuccessful. The stories showed that motivational factors can be connected with one's own, the other members', or the whole team's attitude or performance. Behind motivational factors there were many kinds of perceived reasons. The motivation, inspiration, interest or drive arose from, for example, strong commitment, challenging tasks, a must-succeed situation, an opportunity to learn, new working methods, or a free hand in making decisions. Also competition tended to bring motivation.

Lack of motivation or interest was in turn connected to questions of status, power and timing of the team or prioritization between several teams. Moreover, such unrewarding circumstances as having a temporary job, getting poorly paid, or getting no extra prize or reward for finishing an important project were experienced as unmotivating by team members. Low motivation could also arise from being a member of an irrelevant, passive, or dying team. The examples below illustrate one typical motivational cause of success and one of failure:

Motivation was one of the keys to success. The fact that we knew that we had a free hand to prepare the event the way we wanted gave us more motivation. The fact that we were trusted was great – everyone was ready to work even in their spare time to make the event a success. (#211, s)

Some of the teachers lacked motivation, as they didn't know whether they would still have a job in the autumn. (#248, f)

Knowledge and experience were common explanations offered for success or failure in teamwork. It appears that in success stories the team members were considered competent as a group ("we"), whereas often in failure stories some

members (never "we") were believed to be incompetent. In the latter case the respondent could count himself or herself either on the competent or the incompetent side.

TABLE I
ATTRIBUTED CAUSES OF TEAM OUTCOMES (SUCCESS AND FAILURE): MAIN TYPES AND SUBTYPES

Team success	Team failure
<i>Member characteristics</i>	<i>Member characteristics</i>
High motivation	Low motivation
Knowledge or experience	Lack of knowledge or experience
Responsibility	Irresponsibility
–	Selfishness
–	Tiredness, stress
–	Overconfidence, arrogance
Positive emotions of members	–
<i>Relationships between members</i>	<i>Relationships between members</i>
Equality	Inequality
Team spirit	Lack of team spirit
Atmosphere	Atmosphere
Support	–
Trust	Distrust
–	Conflict
Liking	Disliking
–	Power play
<i>Team communication</i>	<i>Team communication</i>
Planning	Planning
Timing or regularity of communication	Timing or regularity of communication
Openness	Lack of openness
Coordinated effort	Uncoordinated effort
Monitoring of activities	–
–	Neglect of essential tasks
Listening	Poor listening
<i>Team structure</i>	<i>Team structure</i>
Role definition	Role definition
Complementary competences	–
Similarities or differences	Similarities or differences
Team size	Team size
Experience in working together	Inexperience in working together
<i>Team goals</i>	<i>Team goals</i>
<i>Team leadership</i>	<i>Team leadership</i>
<i>External forces</i>	<i>External forces</i>
Resources	Resources
Good luck	Bad luck
Inspiring challenges	–
–	Fate

If team members had knowledge and experience, they knew "what they were looking for" (#236) in the team. Knowledge about and competence in one's tasks and responsibilities, mastery of the theory behind the practice, and skills in working methods and habits were all given as essentials for team success. Success could arise from both practical and theoretical knowledge: from long and varied experience in working and teaming, and from developing an understanding of teamwork, group communication or interpersonal skills.

Being competent enough and working as a broadminded, co-operative, helpful and kind-hearted team member was regarded as highly relevant in team success.

Ignorance and inexperience were manifested in many ways: insufficient knowledge or experience of the task in hand, unfamiliarity with the subject matter, poor ICT and language skills, unsatisfactory skills in teaming, and poor understanding of interpersonal relationships. For individual team members, the issues to be dealt with could be difficult, teamwork

challenging, or mutual guidance and joint briefings inadequate. It was often specified that new team members were lacking know-how and experience.

Group members are used to working in projects, to giving their opinions etc. Members are professionals in the field, they know what they have to do. Nevertheless, they express a lot of different views. (#54, s)

They didn't have any previous experience. The group simply wasn't professional enough to get such a demanding and enormous task done. (#305, f)

Responsibility or *irresponsibility* was regarded as a prominent characteristic of team members in the success and failure stories. Team outcomes heavily depend on whether or not members do their share of the work from the beginning to the end of a particular task. According to team members, it is crucially important for outcomes that members make sufficient effort to accomplish what they are supposed to accomplish.

Team members stated that their team's success depended on everyone doing their part, on commitment to the task and the team, and on sticking to decisions discussed and made together. It is a question of work ethics and conscientiousness: no one is left alone and no one leaves his or her share for others to do. Everyone should be punctual, thorough and willing to do his or her best – or preferably a little more. On the other hand, irresponsibility as a cause of team failure was manifested as indifference, lack of commitment, or negligence in team members. It could also be ducking out of decisions made together. Irresponsible members in the team were also described as lazy, forgetful and uncommitted. In addition, cultural differences were mentioned by the respondents, some of who seemed to perceive responsibility and sense of duty as culturally conditioned.

Even though the team had a leader, everyone took a lot of responsibility and an active role in developing the registration process in their own department. (#87, s)

A member of our team didn't show up for work one day. She had a casual, couldn't-care-less attitude. (#26, f)

Selfishness was mentioned only in failure stories. In addition to selfishness itself, it was expressed as self-centeredness, egocentricity, stubbornness or the imposition of one's ideas on others. A selfish team member dominated or monopolized the conversation, spoke too much or too loud on the mobile phone, or cared only for his or her own rights and privileges. A selfish person highlighted his or her own strong personality and competences, concealed information for his or her own good, or tried to sustain his or her authority. Selfishness was usually seen as a feature in other members – only one respondent declared that she wanted to do the work herself, as this was how she would get the best result.

We failed because of self-centered team members, who kept droning on and jabbering on about inessential things. (#245, f)

Tiredness and *stress* were sometimes causing failures in teams. Along with these words the respondents referred to either their own or other members' individual states of fatigue, exhaustion, pressure, weariness or even burnout.

I felt that most of the nurses were very tired of their work, some of them

even said "do I have to do this for the rest of my life". (#231, f)

Overconfidence and *arrogance* were presented as reasons for failing. The overconfident or arrogant team members made evil comments, found fault with other team members or tried to destroy the team's work.

We failed because of dominating "besserwissers" who crushed the others – we failed because of malicious remarks and insinuations. (#245, f)

Positive emotions of members could be joy, enjoyment, pleasure, happiness, pride, excitement and "flow", which were perceived as causing success.

A kind of pioneer spirit and pride of one's work. (#36, s)

B. Relationships between Members

A variety of causes for team outcomes have to do with relationships between team members. The respondents describe either relationships in which they are involved themselves or relationships between other members. There seems to be no difference between the two. In relationships between team members, eight subtypes emerge: (1) equality or inequality, (2) team spirit or lack of it, (3) atmosphere, (4) support, (5) trust or distrust, (6) conflicts, (7) likes and dislikes, and (8) power play.

Equality between team members was given as a cause of success, and *inequality* as a cause for failure. The respondents felt that to achieve good results in their team, equality and respect for each other were crucial. Everyone's input was important and everyone was respected as a human being, an adult, and in their work. Team members emphasized that in order to succeed in their tasks, all members must be able to express their opinions, have a say in meetings and have at least some influence over decisions. No one should be belittled, excluded or raised above the others.

On the other hand, team failure was often attributed to inequality between members. Inequality was an issue if, for example, hierarchy was emphasized, temporary workers were exploited, people competed for the boss's favor, or the workload was divided unequally. According to the stories, inequality can become evident especially in relationships that may inherently be asymmetrical, such as between old and new, old and young, female and male, competent and incompetent, or experienced and inexperienced team members.

Everyone's equal, each individual's contribution is equally valued, no one is criticized. It is easy to be oneself, to feel useful and to open one's mouth in an equal group. (#290, s)

In my opinion, the inequality of the salespersons was an obstacle to successful group work. Those working part-time were treated as inferior and could do nothing about it. (#11, f)

Team spirit or *lack of team spirit* was an obvious factor for team outcomes. Personal chemistry – good or poor – between members was an expression commonly used in reference to team spirit. As a cause of success, team spirit was described as solidarity or a sense of togetherness or of pulling together. For instance, team spirit was good when team members knew one

another well and enjoyed each other's company in their free time. Team members with a good team spirit had enjoyable coffee breaks together, were healthily competitive in their team, or delighted in well-meaning banter or teasing with one another. They could also enjoy new challenges as a team in their work. As a cause of failure, lack of team spirit was described as not playing in tandem, doing the job but nothing else, or not knowing the other members well. Team spirit could also evolve too late and this way cause unsuccessful outcomes.

Contributors to success were a good team spirit and time spent together during our free time – travelling, jogging, having a sauna. (#109, s)

The leader talked about "our team" all the time, but I never found that "team". Everyone shouted at each other, including the leaders. It was a terrible war all the time. Nevertheless, every day in meetings there was this talk about "our team". (#167, f)

The *atmosphere* of the team was perceived as a cause of both favorable and unfavorable outcomes. A good atmosphere was described as relaxed, carefree, full of humor or ideas, creative, unreserved, high-spirited, respectful and cooperative. In successful teams members could comment on each other's work without being afraid of any adverse reactions. The exchange of personal news was also mentioned as a characteristic of a good atmosphere. In unsuccessful teams, a bad atmosphere could be chilly, tense, envious or judgmental. It could result from gossiping, double-dealing, anxiety, stress, blocks, clans, or fear of failure.

Luckily, there wasn't a single tense or tedious person in the group. So the atmosphere was very relaxed and carefree. (#292, s)

It was all smiles face-to-face, but stabbing in the back behind the scene. One could sense the bad atmosphere. Work was done but the work team and the atmosphere didn't leave a good impression. (#175, f)

Support was brought up in descriptions of good relationships between team members, leading to success in teamwork. Support could be encouragement, mutual understanding, positive feedback, help, thanks and praise. Support meant that nobody was left alone in difficult situations, either in words or actions. There was no mention of lack of support and encouragement in the failure narratives, but hints to that effect can be found in other subtypes, e.g. atmosphere and power play.

We try to carry out our tasks by helping each other with them, so that no one is left with an unreasonable workload, and we understand one another also on so-called bad days, when nothing goes well. (#249, s)

Trust and distrust emerged in the stories. If mutual trust brought success, it meant that members trusted each other, their competence, professionalism, input, as well as attempts to do their part and their best. Sometimes the team had to deliberately build up trust. However, the team could fail if there was even one single member whom the others could not trust. Distrust emerged if somebody was, for example, hiding information or acting dishonestly.

Trust in the know-how and professionalism of oneself and team members. (#242, s)

Group members didn't trust each other, their professional know-how, and their different views. (#104, f)

Conflicts were mentioned as a cause of poor team outcomes. Conflicts were usually described in the stories as severe differences of opinion or as arguments between team members. There was friction or annoying competition between members, nobody compromised or gave in, or somebody exploded. There could be moping, cultural confrontation, smoldering anger, salary disputes, outbursts of feelings, and public arguments. Relationships became inflamed or damaged and the parties withdrew into themselves. Conflicts were occasionally left as they were – the team venture ended up in failure because the members could not manage or resolve the conflict. It appears that conflict was always regarded as negative: there were no descriptions of conflicts being managed or settled successfully.

In the end, problems arose and flamed up between X and the permanently employed person: minor issues evolved into major disagreements. (#299, f)

Liking or disliking was reported as causing team outcomes. Liking was a cause of favorable outcomes when members got along well, there was mutual understanding between them, they were on the same wavelength, or they were friends. Dislike expressed itself in terms of antipathy, reluctance, disgust, and aversion – usually from the very beginning of the relationship.

Everyone liked each other. (#134, s)

Other workers had been against me right from the beginning, and I couldn't get over it, no matter how hard I tried to settle things. (#22, f)

Power play meant competition between members, interfering in others' tasks, greediness for power, fight for leadership, touting for supporters, and polarization in the team. These actions were perceived as causing failure in teams.

Strong personalities stubbornly forced their ideas through. In a way, competition arose in the group about who has the power to decide, even though at the outset it was agreed that the group makes the decisions. (#104, f)

C. Team Communication

Causes related to team communication include descriptions of how team members communicate with one another as a team, leading to good or poor outcomes for the team. Seven subtypes of causes of success and failure come up: (1) planning (2) timing and regularity of communication, (3) openness or lack of it, (4) coordinated effort, (5) monitoring of activities, (6) neglect of essential tasks, and (7) listening.

The *planning* of teamwork can be effective or ineffective. These causes have to do with communication between team members, as planning, preparation and goal setting are jointly carried out in the team. Good planning was referred to as effective, adequate, sufficient, thorough, or careful. It takes time but is rewarding. Successful teams set their goals in joint discussions: they divided the task into major and minor objectives, set intermediate objectives, discussed schedules and identified different phases for their project. They planned their timetables, rhythm and procedures for meetings, rules, policies, or division of work. They anticipated possible problems and made provisions for something going wrong.

Conversely, team failure was attributed to failing to make the necessary joint planning and preparation. They simply did not plan anything, they started teamwork with insufficient, inadequate or incorrect preparation, and they offloaded the planning onto the team leader, completed some but not enough planning, or rushed the planning through. Not all the members were involved in the planning, or they met to plan too early or too late in relation to the tasks to be done.

Especially at the beginning, countless hours were spent building up the team. We made all plans together. We made good plans, first the whole team and then a smaller group. (#246, s)

The plan wasn't detailed enough. It was too vague, not thorough enough. Before a project is started a plan has to be prepared with care, covering the whole span of the project. (#172, f)

Timing or regularity of communication can be a source of successful or unsuccessful teaming. Success in teams was connected to sufficient communication between members, ongoing dialogue, regular meetings and adequate information at the right time. The flow of information was described as quick, straightforward or trouble-free. Members were in continuous contact with one another, they did not sit on information, they used different kinds of communication technology, and they also recorded the most important decisions in writing. They put important documents into a joint databank to which everyone had access.

Failure in teams could derive from the opposite. The team did not agree on the details of team communication, or the members did not discuss matters but acted on presuppositions. Communication may have been infrequent, accidental, or fragmentary. Members did not share enough information, make use of technological innovations; or they talked about the same things over and over again, or communicated by means of small notes on paper.

The nurses in the team have given reports at shift changes; the information has been passed on. (#29, s)

The members of the project group that were geographically distant didn't keep in touch with each other often enough. Poor use was made of collaborative web tools. (#158, f)

In *openness in communication* 'open' was the most common word, but also direct, genuine, free and honest were used. Openness in a team or in its communication, interaction and discussion could mean, for instance, that the members felt that they can show their feelings, admit their mistakes and express troublesome thoughts. Openness was described as a value, strength, way, style, or habit. The opposite was *lack of openness* (the word 'open' was again frequently used): communication was not open or free. Members felt that they could not speak out in their team.

There were open discussions during the working day and in report sessions. The discussions were focused and you were allowed to show your feelings. (#231, s)

One reason for failure was interaction in the group: we talked about things indirectly, not directly. (#83, f)

Coordinated effort includes causes that are related to teamwork in a very essential sense: how teams succeed or fail in uniting their individual members' effort, efficacy and

strength in order to reach their goals. Coordinated effort meant cooperation, collaboration, or being able to work as a real or independent team. Members' views were fused into the team's joint view, the process was the team's own, and the team could enjoy the fruits of hard work. The respondents emphasized that without other members there is no team and that success arises from their outstanding teamwork. Uncoordinated effort, on the other hand, may have led to poor outcomes. It may be that members did not know what a team is, were not competent in forming a team, could not get anything done, got stuck, or got distracted.

In our team we often experienced the joy of discovery when we put together everybody's ideas and achieved all those wonderful things. (#230, s)

The team was only about having coffee and a little gossiping, too – I have the feeling that we didn't get anything done (#84, f)

Monitoring of activities was an action associated only with team success. According to the respondents, monitoring included evaluative recaps, reports, reviews and summaries either in oral or written form, as well as development get-togethers and evaluative meetings. It could mean feedback, evaluation of plans and analysis of work practices in the team. Such activities were apparently accomplished by the team on its own initiative – not because of established practices in the organization.

We met regularly once a week to check the situation. If it seemed that we were not going to reach our monthly target we tried to adopt new tools to reach the target. (#242, s)

Neglect of essential tasks manifested only in failure stories. The teams had neglected, failed or forgot, for example, to gather information necessary for the task, do the essential networking, monitor the quality of products, or check up the time scale for the project.

We didn't carefully attend to orienting the new employee. (#263, f)

Listening was a cause for both success and failure. The respondents attributed team success to good listening from a member's point of view: everybody in the team was listened to and being heard. Respectively, team failure was associated to poor listening, which meant getting not enough attention, approval or respect in the team. Thus listening as a cause is closely connected to equality in relationships between team members.

Different partners were listened to and their opinions were not overpowered. (#254, s)

Everyone talked at the same time. No one was really listening. (#137, f)

D. Team Structure

Explanations for success and failure in teams also concern team structure. Five subtypes of causes of success or failure stand out in this type: (1) definition of roles, (2) complementary competences, (3) similarities and differences between team members, (4) team size, and (5) experience or inexperience in working together.

Roles in a team were defined in many ways and with many degrees of accuracy. Roles, responsibilities and the division of

labor were mentioned as causes of success and of failure. If leading to success, roles and tasks were clear, appropriate or based on competence. The division of labor was described as fair or balanced. Responsibilities were delegated: even though the leader was responsible for leading and coordinating, other members had their own spheres of responsibility. Everyone was empowered or aware of what to do. Roles could be designed to be highly interdependent: if a member evaded his or her share, other members could not continue with their work. Roles could include both absolutely necessary tasks and optional, often temporary tasks. In some teams the description of roles was written and well documented.

Poorly, unclearly or unreasonably defined roles and responsibilities were perceived as a cause of unsuccessful outcomes. Undefined roles bring uncertainty: team members did not know what was expected of them. It might have been that nobody had remembered to assign tasks to team members, one member had been left without anything to do, another member wanted to have all the responsibility, or two members found themselves appointed to do the same thing.

Everyone had a clear idea of his or her role and task. (#160, s)

Our roles felt unbalanced – the scriptwriter took over the responsibilities of the producer, up to the point of giving her instructions and orders. (#261, f)

Complementary competences meant a suitable repertoire of knowledge and skills in the team, with members complementing each other. When mentioned in the stories, it always led to team success. Each member's individual expertise added to the team's shared expertise, or one member's shortcomings were compensated by another's merits. Complementary competences could also mean multiprofessional groups of people (e.g. surgeon, head nurse, secretary, physiotherapist, social worker).

We succeeded in combining the expertise of teachers who came from different starting points. The young teacher fresh out of university plus the older teachers who had the expertise and knew what is possible in real life. (#201, s)

Similarities and differences between team members were mentioned as both appropriate and inappropriate in relation to the team's outcomes. In the stories these characteristics were related to age, sex, background, personality or position in the organization. Similarity and difference in these areas could interestingly be perceived as causing both success and failure, as can be seen in the following examples.

We all had the same kind of character, so we understood each other very well. (#211, s)

There were four very different people in our group – we sort of complemented one another, and we had a very good time. (#99, s)

I think the failure was caused by the fact that we were all women. It caused blocks and weird moping. (#166, f)

Bringing different personalities together caused problems. (#19, f)

Team size was regarded as having both positive and negative effects on team outcomes. Team size was perceived to lead to success when the size was suitable, suitably small, not too big, or sufficiently big. Unfavorable team size was characterized as too big. A convenient team size appeared to be between five and eight members.

The group was sufficiently small for everybody to be 100% committed. (#199, s)

Members were irritated because the team was too big. The members knew that in practice part of the group should have been put into a team of their own, or these people should have been put into another team. (#265, f)

Experience or inexperience in working together caused successful or unsuccessful teamwork according to the respondents. Experience as a team included knowing each other's work practices, having well-functioning group dynamics, and anticipating each other's thoughts. On the other hand, inexperience brought uncertainty, tension, and feelings of not being part of the team.

We've known each other for a long time and we often work together. (#60, s)

The members of the group didn't know each other at all – to create novel ideas with complete strangers is tough. (#223, f)

E. Team Goals

The *goals* of the team could be perceived as common or shared, or when causing failure, as unshared or conflicting. When goals or visions were common, all the team members worked towards them and had clear targets in mind. This, in turn, may lead to prioritization, commitment, concentration, and consensus. The team's success was often very clearly attributed to the common goal, set together in the team. However, even if common objectives had been discussed and agreed by the team, members could still perceive them as contradictory or inconsistent. This was a reason for team failure. Goals could fade and become fragmented or forgotten in the course of work, and individual team members may have begun to work following their own agendas.

A clear goal, a common ambition, had been defined. The end result was useful to everyone. (#54, s)

The lack of a common goal disturbed the smooth functioning of the group. There never was a common goal, but members tried to achieve their individual goals. (#2, f)

F. Team Leadership

Team leadership was an important reason offered for team outcomes. Good leadership was a cause for success and poor leadership a cause for failure. Both were mostly referred to with such simple statements as we had a good leader or we had a poor leader. Teams could fail when there was no leader at all, or when an appointed leader took no action. Team leaders were mostly people other than the respondent himself or herself; however, there were also cases when respondents identified themselves as good or poor team leaders.

Team members described good and poor leaders with a number of attributes. When leading their teams to success, good leaders were described as patient, firm but democratic, analytical, objective, fair, supportive and encouraging, committed, enthusiastic, competent, and rigorous. A good leader possessed a clear vision of progress towards the goal, picked the right people for the team, described well the background of the work task, shared responsibility, gave advice and feedback, and managed the team, team communication, methods of group work and possible

conflicts. A successful leader had training in management and team communication; he or she was the driving force behind the whole team.

Poor team leaders were characterized as uninterested, selfish, uptight, stressed, busy, bad-tempered, and authoritarian. Either they got their own way in everything or they gave way to members too easily. They were not well prepared, they had no overall vision, no experience, or no education or training in the subject matter. They wanted to give orders, dominate and control, they did not accept differing opinions, and they interrupted team members in meetings. They did not manage teamwork, project planning, phasing or control, and they did not delegate responsibility to team members.

The leader of the team was very competent. He knew how to encourage and guide the team members. During our work, the team received constant positive feedback from the leader. (#297, s)

The leader of the team didn't take up any proposals for development put forward by members. Team members interpreted this as indicating that the leader didn't care about team members, about their contribution. (#119, f)

G. External Forces

In *external forces* team outcomes were attributed to factors beyond the team's own control. Four subtypes of causes of success and failure emerge: (1) resources, and (2) good luck or bad luck, (3) inspiring challenges, and (4) fate.

Resources from the administration or management were described as adequate or inadequate. Adequate resources naturally contributed to success and inadequate resources to failure. Sufficient resources were manifested as intellectual or material investments in an organization. These included support, help and feedback from management, or funds, experts and assistants allocated to the team, or comfortable schedules and time at the team's disposal, or equipment (e.g. communication technology) and workspace given to the team. Insufficient resources were unreasonable bureaucracy, economic or time pressures, or lack of material, software or premises, for example.

The management supported the project; resources (training, guidance, working hours) were given. (#229, s)

As the company grew, the small group grew big and bureaucratic. The management wasn't prepared for the problems caused by growth, and the group seemed to have been left to its own fate. (#91, f)

Good or bad luck means that something unexpected or accidental from outside the team was the cause of success or failure. Good luck may have come from positive customers and unexpected help from outsiders; bad luck, in turn, from bad weather, illness, or workers moving away from the workplace.

In my opinion, the success of our team was much influenced by (unplanned) coverage in the media; our team got publicity and we were able to express our views in public. (#286, s)

The manager's wife was taken into intensive care and the manager was away for several weeks. (#194, f)

Inspiring challenges as causing success for teams were

related to, for example, challenging but manageable difficulties associated with the task at hand, demands from the organization, strict but inspiring deadlines, and social pressure. Severe doubts by the organization management as to the team's outcomes were also experienced as a stimulating challenge.

We, the entire staff, knew the importance of this order. We had to succeed! (#165, s)

Fate was sometimes given as a cause for team failure. On such rare occasions team outcomes were fully unpredictable.

The following day the condition of the patient [an animal] deteriorated and it had to be put down. It all had taken much of our time but all our efforts had been for nothing. (#276, f)

VI. DISCUSSION

The findings of the present study indicate that members of organizational teams in working life have a variety of explanations for the outcomes of their teams. In the present study the explanations are examined as attributions: favorable and unfavorable team outcomes are attributed by team members to various causes related to teamwork. We wanted to find out the inherent dimensions and characterizations of these causes, to understand the experience of team success and team failure from the team members' point of view.

Team outcomes – whether successful or unsuccessful – are attributed to member characteristics, relationships between members, team communication, team structure, team goals, team leadership, and external forces. Success in teamwork is typically explained by high motivation, knowledge and experience, responsibility, equality, team spirit, mutual support, effective planning, timing and regularity, openness, clearly defined roles, shared goals, and good leadership. Failure in teamwork, in turn, is perceived to be caused by low motivation, lack of knowledge or experience, irresponsibility, selfishness, inequality, lack of team spirit, ineffective planning, poor timing or irregularity in communication, conflicting goals, and poor team leadership. These descriptions of good and poor teaming, constructed from the findings, are prototypes. They include the many possible elements of faring well or falling apart in teams in organizations. However, the causes do not form any prototypical combinations in the respondents' stories. Instead, it appears that any cause can be present with any other cause when explaining the outcomes of teams.

Many causes – both main types and subtypes – appear to have two manifestations: in success stories the respondents describe a positive phenomenon which leads to positive outcomes, and in failure stories they seem to give just the opposite. Hirokawa et al. [42] discuss the causes to which people attribute both success and failure from the viewpoint of "mirror opposites". They argue that, contrary to a number of models of task group performance, influences on group success and group failure are not necessarily mirror images of each other. The findings of their study indicate that while some causes can be presented as opposites (e.g., good or poor leadership), others are independent features of their own. For

example, conflicts may predict perceived team failure; however, the absence of conflicts is not a sign of team success. The present study confirms the results by Hirokawa et al. [42]. In a number of cause types the correspondence of positive and negative causes is obvious: for example, equality and inequality are mirror images, and so are trust and distrust, high motivation and low motivation as well as responsibility and irresponsibility. However, many types show no clear correspondence. Even though mutual support and complementary competences obviously are regarded as causes of success, their absence is not mentioned as cause of failure.

In a further analysis of the 7 main types and 31 subtypes they can be seen to represent different attribution levels in the context of organizational teamwork. In Table 2 the main types of causes are arranged according to four attribution levels: individual, interpersonal, team, and organizational. The first attribution level is *individual level*, comprising causes that have to do with persons as team members or team leaders: member characteristics and team leadership. The second is *interpersonal level*, comprising causes related to social relationships and social interaction among team members: relationships between members, and team communication (perceived as interaction between individual members). The third is *team level*, comprising causes associated to the team as an entity of its own: team communication (perceived as communication practices adopted in the whole team), team structure and team goals. These are all related to the ways and practices, which the team has adopted into its communication system or culture. The fourth is *organizational level*, comprising causes affecting the team from the outside.

The attribution levels represent the overall dimensions of team members' perceptions of the reasons affecting team outcomes. Only the organizational level includes factors from outside the team; the other levels include factors within the team. Examining causal explanations, the attribution theory of Heider [37] categorized attributions into internal and external ones. Along these lines many attribution researchers (e.g. [47]) have shown that people tend to blame external forces for failure. Little evidence of this can be seen in the present study. An interesting finding is that team members appear to accept their own responsibility for the outcomes of their teams. External forces do not figure prominently as causes of team outcomes: only a small minority of all the causes given for team failure relate to factors beyond the team's own control (only inadequate resources and, to some extent, bad luck come up as causes of failure). Respondents overwhelmingly attribute failure (and success) to internal factors in the teams, even though they could easily have laid the blame (or praise) on external forces. The finding suggests that in contemporary working life workers and employees in a profound way consider themselves to be the main resources of the team.

One explanation for the minor role of organizational attribution level may be the collective nature of the events that

the stories typically describe. The instruction the respondents received may have led them to think of the collective success and failure of the team, not their individual perspective. The stories on which this study is based are written representations of memorable events, and as Poole et al. [48] point out, "group members' responses are ... likely to contain bias, either because they want to make their group look good or because they are too close to the work to make measured, accurate evaluations."

The respondents commonly write about "we" and "us" in the team, and they include themselves in the team. Only seldom is there the idea of "me" being the competent team member and "the others" being incompetent members. The team is definitely perceived as an entity. Competing, showing off, surpassing others, or winning, are not the values of a good team. The virtues that are most appreciated in Finnish teamwork are equality, responsibility, supportiveness and team spirit – all these accentuating togetherness and consensus.

In addition to identifying the factors to which team members attribute the outcomes of their teams, the present study draws a picture of successful and unsuccessful teamwork as experienced by people working in teams. Partly, the picture appears to capture elements similar to those that have been presented in the research area of team effectiveness. For example, such elements of effective teams as democracy [26], in-group relationships [28], expertise [21], complementary competences [23], cognitive similarities [16], shared work values [18], leadership [11], common goal [12], group composition [9] and group size [14] are present in the experiences of team members. It is natural that the characteristics of good teaming are reflected in the stories. Somewhat surprisingly, however, such essential team qualities as getting feedback, accomplishing team goals and conflict management or resolution are not prominent as causes even though they come up in the characterizations of teamwork. Stories can be described as personal constructs of social reality [43]–[44]. This means that the findings of the present study are true as experienced from the respondents' viewpoint. We do not know what exactly happened in the teams, which the respondents were reminiscing when writing their stories. Neither do we know how outside observers would have evaluated the teams, their events or outcomes. However, questions about "true" actions or "objective" judgments are irrelevant in an interpretive research paradigm aiming to understand subjective experiences. Team members are reliable experts in their own interpretations of team performance. As social actors human beings are tied in their own knowledge, which they themselves have constructed. When communicating in teams we compose an individual, interpersonal, communicational and social history of the team. Our good and bad experiences impact on us as members of future teams as well.

TABLE II
ATTRIBUTED CAUSES OF TEAM OUTCOMES: ATTRIBUTION LEVELS

	Individual	Interpersonal	Team	Organizational
Member characteristics	X			
Relationships between members		X		
Team communication		X	X	
Team structure			X	
Team goals			X	
Team leadership	X			
External forces				X

The findings of the present study shed light on the demands of today's teamwork. It is of crucial importance for management to understand the nature of teamwork from the perspective of team members. Members work together to accomplish the goals set by the management and, in many cases, also by the team itself. The interdependence of members in accomplishing such goals is impressively highlighted in the members' experiences. The findings presented here have practical applications for management. They can be taken into account when, for example, evaluating and developing organizational teamwork or training team leaders and members, as well as in auditing teams, team communication and team outcomes in an organization. Team satisfaction and performance need to be regularly monitored by the management. On the basis of the present findings, a questionnaire can be developed in order to follow teamwork and its outcomes in an organization. The questionnaire should include both the seven main types of attributions and the four attribution levels related to team outcomes. They are unquestionably based on experiences from real teamwork.

VII. CONCLUSIONS

A. Evaluation of the Research Method

The focus of the present study was on team members' own perceptions and interpretations of their team outcomes, especially of causes that have led their teams into success or failure. The qualitative approach seems to have captured the experiences of the respondents. This can be concluded from the great diversity of the stories. They are reflective and evaluative in style. The focused wording of the questionnaire generally led respondents to write about both the successes and failures of their teams and the reasons they experienced as having caused them. They produced both detailed descriptions of the various causes and interpretations of the causes.

In gathering the data we used a questionnaire adapted from

Hirokawa et al. [42] in which two stories of personal experiences were requested: one of success and another of failure in teamwork. The rationale of asking for two stories was based on the nature of working in teams, as successful and unsuccessful teams were assumed to differ. This turned out to be the case. Collecting two stories disclosed 12 types (out of 33), which represent only causes of success or causes of failure. For example, if only successes had been asked for, conflicts and selfishness as causes of failure in teams would have remained hidden. Respectively, if only failures had been elicited, support and complementary competences as causes of success would not have been revealed.

B. Challenges for Further Research

In the present study the rich world of teamwork, with its successes and failures, is represented by workers and employees who work in real teams in real working life. Actual teams and groups in organizations definitely deserve more study, especially from the point of view of team members. In this study we were interested in obtaining a cross-section of the Finnish working life. This is why we focused on both professional and skilled work, on people working in fields where knowledge matters and those working in more practical occupations, on female and male, young and old team members. We did not distinguish between any of these groups. However, it would be worth doing comparative research on the different kinds of team members, to find out if there are differences in the ways people perceive team outcomes and the factors contributing to them in various types of contexts, organizations and teams. Moreover, some types of teams are more dependent on rapid and seamless cooperation between their individual members than others; in this respect, for example, health-care teams surely differ from teams that work on creative design.

Another interesting possibility for comparative research can be found in organizations operating in several countries or in

global organizations. The present study showed that team members in Finnish working life appraise values such as equality, responsibility, supportiveness and team spirit. Successful Finnish teamwork emphasizes togetherness, consensus and common goals. Intercultural comparisons can shed light on possible cultural differences in this respect.

Moreover, there appear to be no longitudinal studies of teams and teamwork as experienced by team members and leaders. Repeated surveys and analyses of the same teams and their members would give insights into connections between team outcomes and their perceived causes, over the lifespan of teams.

On the other hand, research could go deeper in the attribution process per se. On what basis do people evaluate and judge actions in their teams? How are attributions formed? The classic theories of interpersonal perception and attribution (see e.g., [38], [49]–[51]) maintain that we neither make observations nor form impressions on other people's behavior very consciously or deliberately. Instead we tend to make hasty judgments based on people's actions and end up with an overall impression. When evaluating teams in everyday working life and trying to find explanations to what happens, team members may fuse together, for example, member characteristics, relationships between members, team communication, structure and goals. It may be only in formal research settings in retrospect – as in this study – where they give a rational analysis of their experiences.

Organizations will in the coming years increasingly be transforming themselves into novel, emergent structures. Information and communication technologies have introduced new kinds of constellations, including virtual teams and networks of practice [52]. The importance of teams has been acknowledged in face-to-face contexts in the workplace. However, we do not know much about the experiences by team members working in teams in technological environments. Research on the outcomes of teamwork, as understood by team members themselves, needs to be extended to technologically mediated teams.

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