

Can one bad apple spoil the bunch?

How one individual MTS member can become a boundary spoiler

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Abstract: Good coordination is pivotal for MTS effectiveness but is also hard to achieve. MTS members' boundary spanning activities can help MTS coordination, yet how an individual MTS member can positively and negatively influence system-level outcomes is rather neglected in MTS research. Our qualitative evidence from three cases shows that a boundary spoiler effect can occur if three specific preconditions are present at the same time, namely: 1) Contextual and role ambiguity; 2) An MTS member with certain personal characteristics; and 3) A leadership vacuum. The boundary spoiler triggers tension within the MTS, causing a rift between the MTS members and component teams, leading to a decrease in MTS effectiveness. Hence, this research extends current knowledge about boundary spanning activities and leadership in MTSs and provides evidence for the direct influence of individual MTS members on the system level. Lastly, it answers previous calls for more longitudinal research on real-life MTSs.

Keywords: Boundary spanning, Boundary spoiler, MTS effectiveness, MTS leadership, Multiteam systems

1. INTRODUCTION

In today's complex and fast-changing society, many critical tasks and operations in business call for the coordinated actions of two or more teams, each one with a unique area of expertise (DeChurch & Zaccaro, 2010). These "multiteam systems" (MTS) are teams that are tightly networked to achieve a collective, overarching MTS goal while simultaneously pursuing their own goals (Mathieu et al., 2001; Zaccaro et al., 2020). MTSs often appear in contexts that are ambiguous, multifaceted and dynamic (Shuffler & Carter, 2018), and their specific and flexible structural characteristics enable MTSs to respond effectively to tasks in a volatile and adaptable environment (Mathieu et al., 2001; Shuffler & Carter, 2018).

Yet, these structural characteristics often hamper MTS' effectiveness (Shuffler et al., 2018; Wijnmaalen et al., 2019; Ziegert, et al., 2022). Formal and informal coordination is crucial for MTS effectiveness (Davison et al., 2012; DeVries et al., 2016; Firth et al., 2015; Marks et al., 2002; Wijnmaalen et al., 2018), since if component teams are not synchronised, they may not only fail to achieve their own objectives, but also to deliver information necessary to other teams, thus jeopardizing the entire system (Marks et al., 2006). Previous

research has shown that coordination does not come easy to MTSs as differences in psychological norms, perspectives, team/organisational cultures, and team processes can hinder communication and collaboration between component teams (Luciano et al., 2015).

As coordination challenges are often present in MTSs, MTS members need a greater variety of skills to be successful (Shuffler & Carter, 2018). An example of pivotal skills for MTS members is boundary spanning activities (DeVries et al. 2016; Ziegert et al., 2022). Boundary spanners are team members who strategically cross team boundaries to improve team functioning: they share knowledge, promote its acquisition, and mitigate conflicts both within and between teams (Colman & Rouzies, 2019). Positive effects of boundary spanning on team performance (Gladstein, 1984), organisational innovation (Hargadon, 1998), conflict management and task coordination (Mathieu et al., 2008) have been studied in teams. Due to the promising nature of the topic, boundary spanning activities in MTSs received considerable research attention. MTS scholars generally share a unanimous consensus around the beneficial impact of team boundary spanning on MTS performance (DeVries et al. 2014; 2016; Firth et al. 2015; Marrone, 2010; Ziegert et al., 2022). However, possible negative effects of boundary spanning activities have barely been the focus of neither team nor MTS research. This is interesting since an abundant body of team-level research shows how the presence/absence of certain personal characteristics of team member are often related to boundary spanning skills and thus can both positively *and* negatively influence team-level outcomes (Coursey et al., 2018; Grijalva et al., 2020; Moore et al., 2012; Reece et al. 2021; Tost et al., 2013; Wong et al., 2022).

Since several mechanisms and processes studied in teams function similarly in MTSs (Shuffler & Carter, 2018), it is very possible that individual team members could both positively *and* negatively influence MTS outcomes. However, so far MTS research has rather overlooked the influence of an individual team member on the whole MTS (Luciano et al., 2015). They have mainly focused on team-system level processes (e.g., boundary spanning as a team-level process between teams (DeVries et al., 2014; 2016; Marrone, 2010)), and, if they focused on the individual level, they underlined the quantity of the interactions between the MTS members instead of their quality (Ziegert et al., 2022). Since the solitary focus on the team-system relations assumes a criticised window-dressing homogeneity within teams (Shuffler et al., 2015; Zaccaro et al., 2012), MTS scholars have underlined the necessity to better understand how individuals contribute to MTS pursuits and how the surrounding context impacts individuals' functioning and behaviour (Luciano et al., 2015; Shuffler & Carter, 2018). For example, research has shown that member role responsibilities and team external focus positively predicted individual boundary spanning behaviour *within* the team (Marrone, 2010), but it is still unclear how these responsibilities and focus unravel beyond the team to impact the whole MTS.

Hence, our scholarly curiosity was triggered when, during a previous four-year study on the relationship between identity and MTS effectiveness of military taskforces in Afghanistan, we noticed something that we called the 'Roger-phenomenon'. This phenomenon made us wonder about these potential negative effects of individual boundary spanning activities on the whole MTS. A well-known quality of inductive research is that it often generates new insights outside the scope of the original research intent (Rockmann & Pratt, 2015). In all three observed taskforces there seemed to be 'a Roger', alias an MTS member who started showing boundary spanning behaviours with extraordinary negative influence on the effectiveness of the whole MTS. These are the words of the commander of one of the military MTSs: "*Roger's behaviour was something that unfolded in the side lines of our main assignment; however, it really influenced our work*". This observation made us wonder how an individual MTS member could have such a seemingly disproportionate negative impact on the whole MTS. Hence, we returned to the original interview transcripts

and observations to venture new avenues of MTS and boundary spanning knowledge. Hence, our paper focuses on discovering: ***How does a Roger phenomenon transpires?***

By addressing this question, we extend MTS research in three ways. First, we shed light on the possible detrimental effects of a construct that has always been interpreted as having a positive aura within the field of MTSs, namely being an MTS boundary spanner. Secondly, we extend current knowledge on how individual MTS members and their characteristics affect collective pursuits at higher levels. Lastly, our study answers previous research calls on adopting longitudinal research designs on real-life MTSs and more qualitative research methods (Burke, 2014; DeChurch & Mathieu, 2009; Porck et al., 2019; Shuffler & Carter, 2018) to understand how MTS processes unfold over time.

2. METHODS

2.1 Research Setting & Context

To develop a rich understanding of how such a Roger phenomenon transpires we relied on secondary data, collected during an ethnographic field study of military engineering taskforces during their deployment in Afghanistan. The three taskforces central to our study are appointed, newly formed, and formalized MTSs. Two of the three taskforces consist of: 1) the *contractor team*, whose tasks are to plan, monitor progress and quality of the construction objects, as well as coordinate with the contractor's office in the Netherlands; and 2) the *construction team*, responsible for the actual construction tasks. One taskforce has an additional team, the *communication and information CI team*, responsible for laying telecommunication cables within the newly constructed buildings. The teams need each other to achieve the taskforce's goals. For instance, whilst the construction team depends on the contractor team for construction drawings, the correct materials, and equipment, the contractor team depends on the construction team for progress information of the planning, and quality of work. Table 1 provides an overview of the similarities and differences between the MTSs.

Table 1: Similarities and differences between the three cases

	Case 1	Case 2	Case 3
<i>Number of component teams in MTS</i>	2	3	2
<i>Number of individuals across the teams</i>	Contractor: 5 Construction: 16	Contractor: 4 Construction: 10 CI: 8	Contractor: 4 Construction: 9
<i>Life span of the MTS</i>	7 months	8 months	5 months
<i>Organisational diversity</i>	Mother organisation: Operational Support Command Army.	Mother organisation: Operational Support Command Army.	Mother organisation: Operational Support Command Army.

	Both CTs are from the engineering battalion	Two CTs are from the engineering battalion. One CT is from the Communication and Information battalion	Both CTs are from the engineering battalion
<i>Geographic dispersion</i>	Co-located & partly dispersed	Co-located	Co-located
<i>Cultural diversity</i>	Homogeneous	Homogeneous	Homogeneous
<i>Change in leadership</i>	Yes, first in command changed (from ‘bad leadership’ to ‘good leadership’)	Yes, second in command changed. Overall, ‘bad leadership’	No, changes. Overall, ‘good leadership’
<i>Origin of the leadership</i>	Both 1 st - and 2 nd -in-command were from the contractor office. Second 1 st -in-command was from the engineering school, he was assigned to the contractor’s office for this deployment	1 st -in-command was from the construction company. Both 2 nd -in-commands were from the contractor office	1 st -in-command was from the construction company. 2 nd -in-command was from the contractor office

2.2 Research Design

The first author spent her time in the field observing the actions of individuals across the above three different MTSs, interviewing team members across multiple roles. The use of ethnographic data collection enabled the researcher to track the group dynamics and developments in real time in all the three MTSs. The combination of observations and interviews prior to, during and after the deployments of these MTSs, allowed us to really *understand* how processes developed between the MTS members. Since we had access to people at many different levels in the organisation, from several central figures to several secondary, ‘ordinary’, figures, it was possible to gather all-rounded insights about routines, issues, and perspectives of our participants, as well as view the dynamics from multiple perspectives.

The first author gained access and was introduced to the field site through the commanding officer of the contractor office. From that introduction onward, the researcher met people throughout the engineering battalion organically as she came to the contractor’s office almost every day, observing and joining the day-to-day social activities for almost three years. The researcher spent as much time as possible talking with the members of the engineering battalion to gain trust of the research participants and they would not feel ‘observed’ when she was in the room. The appreciation for the time the researcher invested made the employees very frank and honest during the interviews and observations.

By studying three very alike MTSs (see Table 1) within a similar deployment this research design controls for several external influences. Firstly, the structure of the engineering taskforces enabled us to “hold constant” both the goal of the deployments and the influence the headquarters in the home country had on the MTSs. Secondly, all three MTSs

were part of the same operational support command and engineering battalion, which helped account for characteristics related to management and organisational support that could influence the processes in the MTSs. Thirdly, the impact of the only CI team on the dynamics within the MTS was minimal, as the tasks of the contractor and construction teams were more intertwined. Lastly, in each case something ‘unique’ happened (e.g. a political decisions influenced the scope of the MTSs’ assignment and the length of the deployment; logistical problems). These variances provided us the ability to study the adaptability of the three taskforces.

2.3 Research Instruments

Semi-structured interviews. The first researcher conducted 85 formal interviews and approximately 1375 informal conversations (see Table 2). All the interviews were semi-structured and conducted face to face; only two were via phone. Semi-structured interviews were chosen to probe more deeply into the individual perceptions of team member dynamics. This style of interviewing is particularly effective for uncovering people’s cognitive and emotional perspectives, as well as at facilitating the identification and comparison across the emerging themes (Miles & Huberman, 1994).

Table 2: Number of semi-structured interviews and informal conversations over time per component team and per case

	Number of semi-structured interviews					Approximate number of informal conversations
	<i>Pre</i>	<i>During</i>	<i>Post</i>	<i>Eyewitnesses</i>	<i>Total interviews</i>	
Case 1						
- Contractor CT	6	3	6	14	40	350
- Construction CT	4	1	6			200
Case 2						
- Contractor CT	4	2	4	5	35	400
- Construction CT	3	3	4			200
- CI CT	8	1	1			75
Case 3						
- Contractor CT	1		4	0	10	75
- Construction CT	1		4			75

Whilst the informal conversations took place during coffee breaks, lunches and hallways run ins, the interviews were conducted in private spaces, were audio recorded and transcribed verbatim, concealing participants’ identity and personal information. To prevent the loss of important non-verbal behaviour the researcher named non-verbal aspects during the interview, so that they could get recorded. Names used in this article are pseudo names. The length of the interviews varied between 45 and 150 minutes, and participants were asked about: (a) their expectations from their mission; (b) their previous experience; (c) cooperation

in the taskforce (d) current team spirit; (e) relationships between team members; and (f) communications between team members (see Appendix 1).

Observations. A combination of field notes and recordings was used. In these field notes, the researcher wrote down what she/he saw, heard, felt, and noticed (DeWalt, et al., 1998). Since recording meetings or conversations with more people talking was more accurate than writing notes, the first author also started using recordings together with field notes. The conversations/meetings were thus recorded, while at the same time notes were written about the context, the atmosphere, expressions of people, and their body posture.

2.4 Analytic Approach

We conducted an inductive, qualitative study using a grounded theory approach (Strauss & Corbin, 1990) based on secondary data. We chose this approach as it is appropriate if the research aim is to extend current, or develop new, theories whilst focusing on contextual and processual elements surrounding the phenomenon under consideration (Suddaby, 2006). Furthermore, we used case studies since they are ideal for studying a new phenomenon since they make it more observable, evident and easier to understand (Eisenhardt, 1989). Through an interpretive discursive lens (Miles & Huberman, 1994), our purpose was to produce a rich account of participants' experiences, voices, and narratives to extend current knowledge with novel insights (Strauss & Corbin, 1990).

We analysed the data iteratively, going back and forth multiple times between our data and our emerging structure of themes (Miles & Huberman, 1994; Strauss & Corbin, 1990). This process involved removing, merging, and renaming codes/themes. During this phase, we started coding independently three interviews and amply discussing the codes to establish a strong inter-rater reliability. Once we found alignment, we proceeded with the remaining interviews and kept having regular and long discussions regarding our interpretations and structure of the data. We relied strictly on the language used by the participants to frame issues and concepts in our findings to maintain a connection with the raw data. We also read up on a broad range of topics, from MTS structures to boundary spanners, and from leadership to interpersonal dynamics, to understand in a mutual process how existing research could help us refine our emerging insights from the data.

3. RESULTS

Below we present our findings interlacing the three cases to provide an in-depth description of how a Roger phenomenon transpires and how it leads to what we call a 'boundary spoiler effect'. A boundary spoiler transgresses team boundaries in an MTS, but achieves the opposite effects compared to a boundary spanner. A boundary spanner is the glue, while a spoiler creates rifts. Our analysis shows that an MTS member can spoil a system if three preconditions are present at the same time, namely: Contextual and role ambiguity; An MTS member with certain characteristics; A leadership vacuum.

1) Contextual and role ambiguity

All three taskforces are confronted with unexpected events early-on in their existence leaving them in an ambiguous situation. The case data shows how the contextual ambiguity and the military setting (MTS members cannot leave the base) work as a pressure cooker as there is no relief valve. Hence, small issues are amplified, emotions run high fast, moods are affected, and tensions arise.

For instance, in Case 1, already before departure, the MTS leader received news that the MTS could not start their projects due to delays. Heated discussions about MTS' tasks,

lack of basic equipment (e.g., phones, computer, desks, chairs) and what was best for the MTS characterised the first week, given that the MTS members were cooped up in one tent that functioned as office, bedroom, and recreational space in 40 plus degrees Celsius. *“It was just an unpleasant situation, you are trying to manage stuff, get computers, works space, etc. Yet everything is rejected, and you are the one who brings bad news to the group every day”*. The lack of the leader’s success irritated contractor team members, who started questioning the ferocity with which the leader fought for them. Moreover, the lack of work creates a setting in which *“Non important things all of a sudden become very important, just because there are no other things to do, plus there is no work which leads to frustration in general, and also with each other”*. Prejudices and doubts surfaced: *“I was a bit sceptical whether the contractors would arrange the prerequisites”*; and *“Some people [i.e., Zack] just do not have it in them to be able to manoeuvre in such a complicated context”*.

Also, in case 2 tensions started rising due unexpected contextual changes to the hectic context: *“The situation created tension. It was messy, we could not find our materials, the assignment was a lot bigger than expected”*. Frictions and misunderstandings occurred: *“People did not want to communicate anymore and there was no mental space for trying to understand each other”* and *“What happened has put certain personalities in a specific situation and from that situation things escalated even more”*. Similarly, in case 3, halfway into the deployment, the taskforce had no more work to do, but could not leave Afghanistan, so the leader and the second in command looked for an assignment to fill the work-void. The new task is met with enthusiasm as well as irritation: *“Of course, we want a new assignment”* but *“We had clear tasks, why do you need to change that and add things?”* and *“Did he even think about where is he getting the materials? He did not even ask me if it is doable!”*.

2) An MTS member with certain personal characteristics

The case comparison points to a second pre-condition: the presence of an MTS member with certain personal characteristics: *“It is just really the way a person is”*. The case data reveals four specific individual characteristics (both attitudinal and behavioural): A strong sense of purpose; Strong voicing behaviour; (Under)developed sense of social sensitivity; Hubris behaviour. To increase the readability of the paper the main players are named in Table 3.

Table 3: Overview of the main players per case

Cases	Roles
Case 1	MTS leader: Zack, later Max. Second in command & boundary spoiler: Roger
Case 2	MTS leader: Chris Second-in-command: first Leo, later Frank Boundary spoiler: Simon
Case 3	MTS leader: Pete Second-in-command: John Boundary spoiler: Seth Group leader of Seth: Ryan

Strong sense of purpose. Our data depicts how the boundary spoiler feels compelled to help. Whether the boundary spoiler’s intentions are perceived as helping-behaviour seems to lie in the eyes of the beholder. In case 1, for instance, Roger thought Zack was not taking care of the MTS *“I [Roger] took over the task and tried to arrange things. So, indirectly I might have undermined Zack’s trust, that was not my intention, but we needed those things, so it needed to be done. [...] I was trying to set a good example”*. Also in case 2, Simon was very clear

about his purpose: *"I am not afraid to say 'no'. I know what tasks I have and what I am in Afghanistan for. I just must make it right. [...] Hence, I decided to address the issue, because otherwise we were going to act like a bunch of old ladies again and not talk to each other for days"* and Chris noticed: *"If Simon said something, it hurt, but it was often with the right intentions, at least at the beginning of the deployment"*. Similarly in case 3, Seth really wanted to contribute. *"He was really working hard preparing all the different assignments"*. but he also felt mistreated by his superior [Ryan]. The leader of a fellow soldier reported: *"So, Seth told him [the fellow soldier], behind my back, that people were talking about Seth, saying that he is lousy men and very slow and lazy. 'Why?' First, it was not true and, if it was, 'Why would you tell him?' Yet Seth thought differently"*.

Strong voicing behaviour. Another distinguishing boundary spoiler' characteristic is their strong voicing behaviours. For example, Roger noted: *"I was often portrayed as the bogeyman just because I was the person who conveyed the messages that we took as a team"* and *"At first I really tried to keep my mouth shut, but then when Zack started blaming others again for everything, I got really angry and said: 'Listen Zack I do not think you understand what the message is here: we do not trust you'. I know it sounds very harsh, but it is true"*. In similar ways, Simon openly vented their opinions: *"I am very honest, sometimes I am wrong, but then you can address me. But at least I opened my mouth and people know what I think [...] I know I am opinionated; I believe that if something is the matter you must speak up"*. And MTS members about Seth: *"If Seth is not happy you will know. He will become very cranky, very contrary and there is no one who can talk him out of it"* and *"Seth was on a 'tour of destruction'. He already had several confrontations"*.

(Under)developed sense of social sensitivity. In the first two cases, the boundary spoilers do not seem to care if their remarks hurt people or are misunderstood. Roger, for example, said: *"In my eyes nothing really occurred. I know I often raise my voice, yet I do not mean anything by it, however sometimes this is taken in differently by people"*. Similarly, Simon stated: *"If Dillon [logistics officer] has problems with me, he should come to me, I am not going to ask him every week how is doing. I do not really care what people think"*. And an MTS member noted: *"Simon voices out his criticism immediately, unnuanced and direct"*. Contrarily, Seth seems to have a highly developed sense of social sensitivity; he knows exactly how to make his words hit the target. An MTS member: *"Seth was quite cunning. He is smart and started to look for people who he could influence to think the same"* and *"He was purposively shutting Ryan out and ousting him"*. Seth seemed to be aware that his behaviour was hurtful and only stopped when he received the message that he was send home: *"Seth addressed the whole MTS and publicly apologised to Ryan, how he treated him, and the way he was influencing the group. However, because he apologised, I also felt that he was acknowledging that he was purposely creating the situation"*.

'Hubris' behaviour. Lastly, the evidence in all three cases points to boundary spoilers' behaviours that were arrogant and haughty. For example, MTS members from case 1 noted: *"Roger walked around like he was a king with that yellow cord, every Dutch soldier looked at him, like 'What is wrong with him?'"* and *"When Zack left, Roger thought that he could be the men of the hour and started acting all high and mighty. So, I started to be more direct in my communication towards him"*. Similarly in case 2, Simon is described as: *"A good example of a loudmouth", "A game cock"*. An MTS member recalled the following episode: *"We had built a wooden bridge, however Simon did not agree beforehand on the plan. When he saw the bridge, he said: 'That bridge has to go, you will make a new one'. We asked him why, as the bridge was perfectly fine. He replied: 'Because I say so'".* In case 3, MTS members stated about Seth: *"He cannot handle authority [...] he is a real alpha male"*. Seth's dominant

‘aura’ made others want to follow him: *“He really became kind of a leader of the pack with a mow hawk, lighting glasses, and a few men started to follow him”* and *“Seth had this appearance around him which make people want to follow him [...] he had a very strong personality and if you put him with people who have a weaker personality, he started to influence them”*.

3) Leadership vacuum

The case comparison indicates how a leadership vacuum can push an already toxic mixture of an ambiguous context and the presence of an MTS member with certain personal characteristics over the edge, creating a situation in which one individual MTS member can decrease the MTS effectiveness. MTS members from the three cases observed: *“I hate to say it, but the MTS leader has been key in the problem we had”* or *“Over time we all concluded separately that many things would have not escalated if he [MTS leader] would have just played his part right”* and lastly *“A leader like him amplified everything”*. From the case data we distilled what constitutes effective MTS leadership: Unity in MTS leadership; Socially sensitive and reflective MTS leadership; Moderating role of MTS leadership; and Decisive MTS leadership.

Unity in MTS leadership. In all three cases, MTS leadership unity strengthens the stance of the leadership, prevents ambiguities, and creates a united front. At the start of case 1, distrust between Zack and Roger weakened the leadership unity. *“Zack felt betrayed by Roger. He thought Roger purposely forced him out of his position for some sort of personal benefit”*. Yet, later Aaron, the new second in command, and Max were a close management duo, and the effect was immediately noticed by the other MTS members: *“From the moment Max and Aaron were a duo, it really went well”*. Similarly, in case 2, Frank stated: *“I felt that Chris doubted everything we said and reacted as if we attacked him. But that was not our intention. My goal was to get this taskforce to work well”*. It was different in case 3, where John remarked: *“Pete [leader] told me that he really felt we lead this deployment together; together we fought against the outside world and inside the MTS”*. And a group leader in that taskforce stated: *“The rumour spread that the leadership was putting a bad light on Seth during the meetings, and then I stepped up and said this had not been the case as I was in all those meetings”*.

Socially sensitive and reflective MTS leadership. The case comparison shows sensitivity is needed to ‘feel’ possible pain in the system to be able to act effectively as MTS leadership. In case 1 (under Zack’s rule) and case 2, MTS leadership lacks this sensitivity. On the contrary, case 1 (under Max’s rule) and case 3 clearly depict how sensitivity benefits the MTS. In case 1, Zack did not acknowledge Jim as the leader of the construction team. Zack hardly asked Jim for his opinion. The situation changed drastically when Max took over Zack’s role: *“I never criticised Jim in the meetings. I felt that would be disrespectful and unprofessional. So, if there were issues, I always took him aside and discussed it with him in private”*. MTS members in case 2 described Chris as follows: *“He thinks his communication skills are very good, but they are not. He alienated people by being so blunt and stubborn”* and *“He is simply incapable of dealing with people”*. Interestingly Chris saw himself as considerate and thoughtful: *“I think I am someone who always tries to understand what the other person is trying to say to me and pick up on the subtle cues”*. In case 3, Pete was very different: *“Pete is smart and has a mind of his own. He is open for suggestions and reason”*. Another MTS member added: *“Pete acknowledged to me that I had been right, and that he should have reported the situation earlier to his superior”*.

Moderating role of MTS leadership. Our data points to MTS leadership as the glue between the teams and a moderator to prevent miscommunication and conflicts. In the first (under Max' rule) and third case, the MTS leadership acts as a moderator. This is how Max described his role: *"I worked non-stop on personal issues, because of all the internal struggles. I tried to talk with the men every time I saw them, and tried to explain Roger's behaviour. Roger feels that he is executing his task the way he sees fit. So, I tried to create acceptance and add nuances to everything"*. Similarly, in case 3, MTS members noted: *"The MTS leader positioned himself between Seth and Ryan [...] I think it is the role of the leadership to moderate between the people"* and *"For a long time Pete was trying to appease the situation by talking to both Seth and Ryan hoping things would settle"*. Pete said: *"I talked with Seth on several occasion and told him: 'You must decide how you want to handle the situation. Will you be an adult and deal with it in a professional way?'"*. Contrary, in case 2 Chris was incapable of this moderating role: *"In the construction team things were also scalding a bit between the leaders and the men, but Chris did not intervene. He was the commander, he was the one who needed to notice and react, but he did nothing"*. Franks described: *"If Chris had done more, things would have not escalated so much between Leo, Simon, and me. There would have been less tension"*.

Decisive MTS leadership. The evidence in case 1 (under Max' rule) and case 3 shows how effective MTS leadership halted negative spill-over by being decisive and acting. Max explained: *"As a commander you must be able to say: 'Nice you all feel this way, but this is how we are going to do it'. Otherwise, people with the loudest mouth will state what we will do. At one point I saw Roger had a booklet where he noted down the names of men who wore their uniform wrongly. So, I told him: 'We are on a construction site in 40 degrees Celsius and you are worried about what the men are wearing?! I do not want to see that booklet again, that is not how we work!'"*. Similarly, MTS members from case 3 noted: *"Pete was decisive and addressed things"*. Pete himself stated: *"Sometimes you have to make not so nice decisions in the hope that things will flow again afterwards"*. Data from both case 1 (under Zacks' rule) and 3 showed the opposite. When MTS leadership failed to act it would lose its protective barrier function towards the rest of the system. For instance, MTS members about Chris mentioned: *"He should take decisions. He just did not do that"* and *"During meetings it often occurred that Leo and Simon were in a discussion and then you need a commander to make decisions, yet he stayed quiet"*.

How does one individual MTS member become a boundary spoiler and influence MTS effectiveness?

The previous paragraphs describe the preconditions that set the stage for a boundary spoiler effect. Additionally, the data offers insight into how the boundary spoiler effect mechanism works.

The presence of the boundary spoiler creates tension in the MTS. In all three cases MTS members noted how the identified boundary spoilers created tension. Max stated: *"As a consequence of Roger's behaviour there was a lot of tension. For example, once we passed by the table where the men were sitting and said 'hi', but they did not reply. Roger could not handle this kind of treatment; he got very flustered, and he was not good at hiding how he felt [...]"* These were all things developing in the sidelines, but they really impacted the team. It created a lot of irritations". In case 2, MTS members noted: *"Having dinner together was like riding in a train. Everyone was looking in a different direction. It was just so obvious that none of us wanted to be there. It was just so frustrating that we were working in such an atmosphere"* and *"They were like little children stomping their feet. You just noticed the tension between Chris and the contractor team"*. Similarly, in case 3: *"The atmosphere*

became almost grim, especially when Seth was around. Then everyone seemed on edge, and you really had to be careful with what you would say [...] You could just feel the tension in the air". An MTS member underlined: *"The whole taskforce was suffering because of the behaviour of this little guy"* and after Seth left MTS members described how *"It was like a light switch was turned on. There was music playing, laughter, singing and people were fetching each other coffee"* and *"The tension was gone, and we went for dinner, there were no more separate groups"*.

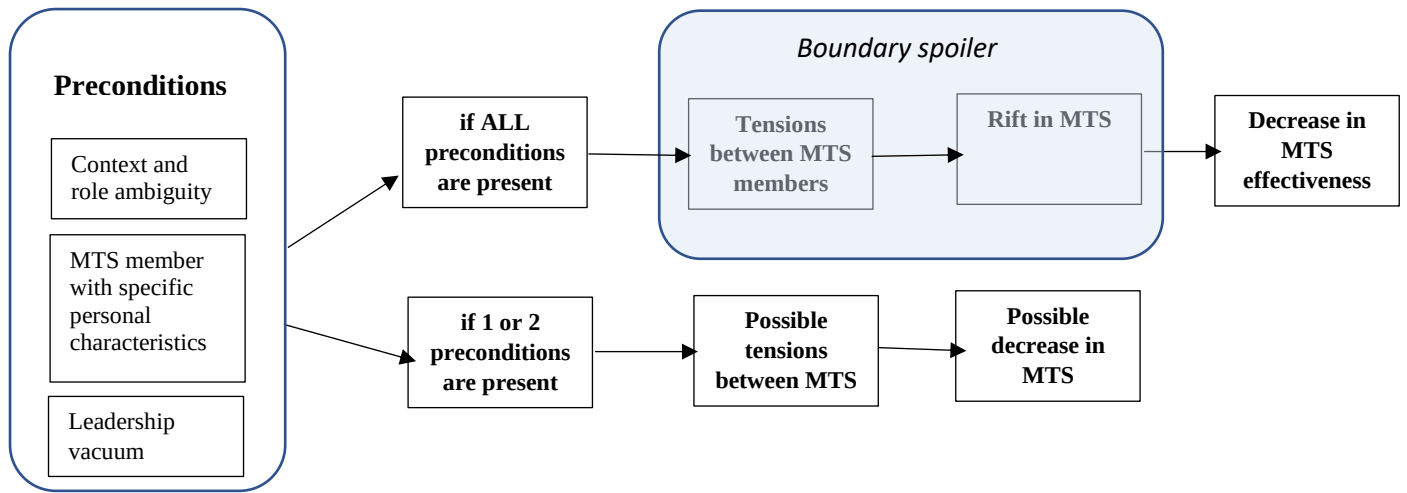
The tense atmosphere creates a rift between MTS members/components teams. The MTS members of our three cases all reported a rift in their teams due to the tension created by the boundary spoilers. For instance, in case 1: *"Rogers's presence had negatively marked the atmosphere and behaviour between the groups and his attitude seeped through the cooperation within and between the teams"* and *"The contractor team sucks. No matter the good guys in that team, it sucks as a whole, because of Roger"*. The following episode occurred in case 2: during one of the coffee breaks, a construction team member poked his head into the contractor office to ask if there was fresh coffee. Simon replied: *"No, because you guys drink all the coffee, but never put on a new pot. You scum!"* Angered by Simon's reaction, the construction team member told his colleagues what happened and added: *"I already had trouble just entering their office, and then this happens. They really suck!"* Similarly in case 3, Seth's behaviour created rifts in the MTS: *"His behaviour created sub-groups within the taskforce negatively affecting the work that needed to be conducted"*. An MTS member underlined: *"You saw different fronts within the taskforce. When the 'Seth thing' was going on, we did not go for dinner together and played no sports together"*. The rifts disappeared when Seth left: *"You saw the difference already in that same week: the group came together again"*.

The rift between the MTS members/component teams negatively affects MTS teamwork processes. In the first case this effect was evident as construction team members actively ignored Roger's orders: *"You saw the frustrations and displeasure on the men's faces and at one point the men did not want to work anymore. They started to put their heels down in the sand"*. MTS members also started avoiding being around Roger: *"I totally ignored Roger. I thought that was for the best as I was so frustrated with him"*. Similar effect occurred in case 2: *"I told Simon if he wants to get rid of the bridge, he can do it himself"*. Moreover, the anger towards Simon influenced other MTS members' behaviours: *"Sorry, I snapped at you this morning, but I was just so angry. That anger was directed at Simon not at you"*. And *"This cocky-behaviour of only thinking of your own task, making decisions that benefit you, instead of looking at what is best for the taskforce, is just rubbish"*. In case 3, Seth purposely stopped providing Ryan with information, this active subversive obstruction caused Ryan to lose his powerbase with the rest of the group members. *"He lost his grip. He was unable to lead them. We suspected that this was caused by one person, which was later confirmed"*. MTS members described how they started to talk less. *"People were not talking to each other. Not about personal stuff and not about work"* and *"At one point we started to work parallel to each other, no longer working together"*.

4. DISCUSSION

Our goal was to unravel how the Roger phenomenon transpires. In Figure 1 we offer a visualisation of our insights. If three preconditions are present at the same time, the stage is set for the appearance of a boundary spoiler effect: tensions and a rift between the component teams and MTS members, leading to a decrease in MTS effectiveness.

Figure 1: Process model



4.1 Theoretical Implications

Previous work on boundary spanning found that boundary spanning activities improve MTS effectiveness (Colman & Rouzies, 2019; DeChurch & Marks, 2006; DeVries et al., 2022; Langley et al., 2019; Marrone, 2010). However, our study clearly shows the possibility of an opposite effect, namely a situation in which boundaries are spoiled and MTS effectiveness decreases.

Several MTS scholars have written about how a high degree of dynamism internal and/or external to an MTS can destabilise the system (e.g. DeShon et al., 2004; Luciano et al., 2015; Rico et al., 2016; Zaccaro et al., 2012). Yet, context as the main explicant for on MTS' effectiveness has not yet received much attention within MTS literature. Interestingly the same is true for team scholars often point to the influential role of context for team development (Gersick, 1988; Passos & Caetano, 2005): the role of context is often neglected (Johns, 2018) with only little research providing rich descriptions on the social, physical, emotional and organisational features of the research settings (Maloney et al., 2016). Because of our research strategy we were able to study in-depth individual-MTS processes (Shuffler et al., 2018) and see how the boundary spoiler mechanisms occurs within real-life MTSs. This way of studying MTS generated so much detailed information, that it not only underlines the call for more empirical-based examination on real-life MTSs through inductive, qualitative and longitudinal research (Burke, 2014; DeChurch & Mathieu, 2009; Porck et al., 2019) it puts an explanation mark at the end of this call. As this rigorous way of studying MTSs has shown us how although the complexity of the operating context of MTS is the *raison d'être* of MTSs (Mathieu et al., 2001; Shuffler & Carter, 2018; Zaccaro et al., 2020), MTS members are not immune contextual ambiguities and context should be on the short-list of variables we need to study if we want to understand MTS workings.

The second contribution to MTS literature extends our current knowledge on the connection between the individual and the system level. Our findings clearly demonstrate that an individual can directly influence the effectiveness of the system. Interestingly this connection between the individual and the system level is not present in Marrone's model (2010), nor is it in scope for many MTS scholars, as the overall predominant attention has gone to the team-system relationship (Luciano et al. 2015; Shuffler et al., 2015; Shuffler &

Carter, 2018; Zaccaro et al., 2012). Yet, our results highlight the necessity to conduct more research on the link between the individual and the system level. A few MTS scholars have similarly underlined the importance of shifting our understanding from the team-system relationships to the individual members' impact on the system (Shuffler et al., 2015; Shuffler & Carter, 2018; Zaccaro, et al., 2012). Luciano and colleagues (2015), for instance, are the first who try to explain at a theoretical level the interplay of individuals, teams, and systems. With our work we provide fresh empirical evidence for this new avenue of MTS research in which the boundary spoiler phenomenon can be seen as the missing link between these micro and macro dynamics.

Furthermore, our work sheds light on the behavioural and attitudinal characteristics of MTS members more prone to become boundary spoiler. Although the influence of individuals with certain personal characteristics on team effectiveness has been extensively found in team literature (Kelly & Barsade, 2001; Passos & Caetano, 2005), this topic has not yet been studied in MTS contexts. Yet, our empirical results show that an MTS member with specific individual characteristics (e.g., hubris and voicing behaviour) in combination with the two other preconditions, namely contextual and role ambiguity and a leadership vacuum, can negatively impact the delicate balance within an MTS. Hence, the role of individual MTS members should not be neglected in an MTS setting.

Additionally, our results add on what is known about MTS leadership. Previous studies show how good MTS leadership is paramount for MTS effectiveness (DeChurch & Marks, 2006; Murase et al., 2014; Torres et al., 2021; Zaccaro et al., 2012). However, these studies focused on the position of the MTS leader from a team-system perspective. Our results show how MTS leadership acts as a protective barrier between the individual and the system level. The data also provides a glimpse as to how this protective barrier functions. For example, unity in MTS leadership prevents noise in the MTS and enables an MTS leader to direct an MTS towards superordinate goals (Carter & DeChurch, 2014). Hence, we propose that MTS scholars should widen their perspectives and add the individual-system level when they study MTS leadership.

4.2 Practical Implications

Our research has also implication for practice which can positively impact society. Firstly, a hierarchically situated "leadership" or "integration team" to coordinate the efforts of all component teams in support of superordinate goals is a highly effective way of structuring MTS processes (Davison et al., 2012; Mathieu et al., 2017; Murase et al., 2014; Zaccaro et al., 2012). Our results add to this advice by explaining why it is a good idea. We suggest organising the MTS leadership hierarchically, as it creates a position in which the MTS leadership has the authority to make decisions and act when needed.

Secondly, we advise practitioners to promote teambuilding programmes for MTSs, so that they better understand everyone's role in the greater system, plus get to know each other better. The work of DeVries et al. (2022) shows how switch tasks can increase MTS effectiveness.

5. LIMITATIONS & FUTURE RESEARCH

As in all research, this work is not without limitations. Firstly, although the military setting is often considered an optimal context to study MTSs dynamics (Shuffler & Carter, 2018), it is also a very peculiar environment with a rigid chain of command, which may limit the generalisability of our findings. Therefore, we encourage future work to explore the existence and development of the boundary spoiler phenomenon in other MTS contexts (e.g.,

medical response MTS) to add further nuances. Secondly, although the data in which we grounded our analysis was longitudinal, rich, and elaborated, it was still secondary data and originally collected for another study. This fact gives us extra confidence we circumvented the interpretation bias, yet it also meant we could not go back to our participants and ask for further insights. Hence, future research may be designed with a dedicated attention to better understanding processes and mechanisms of boundary spoiler phenomena.

6. CONCLUSION

In this paper we investigated the Roger phenomenon. We found that MTS members, with certain individual characteristics, who find themselves in an ambiguous MTS context with a leadership vacuum, are prone to become boundary spoilers. A boundary spoiler has an extremely powerful negative influence not only within their more proximal team, but also on the whole system, and thus deserve to be explored further.

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Appendix Interview strategy

As a sign of respect for the interviewee the researcher was always prepared and on time for the interviews. Respect is important as it influences the chemistry between the researcher and the interviewee, and subsequently the quality of the data. Additionally, the researcher had only one opportunity to conduct the interview, so she had to do it right. Coming early creates the opportunity to have a coffee with the interviewee and build rapport. Rapport is if both parties in an interview have a genuine interest in the questioning, the answering and the listening conducted during the interview (Boeijs, 2010, p.62). Small-talk eased people into the interview. Moreover it helped the researcher probe the interviewee. The researcher tried to influence the setting in which the interview took place as best as she could. She tried to sit somewhere private, free from external stimuli (to keep interviewee and interviewer focused) and with an optimal seating arrangement (angle between 45-90° between interviewer and interviewee). Interviews took place in offices, meeting rooms, a shipping container, outdoors, and in empty staff rooms.

The same interview protocol was used in all interviews. The protocol consisted of a piece of paper stating the topics which should be mentioned in the introduction, the main variables, a list of possible interesting variables, and some interviewee-specific questions. The interviews started with an introduction of the research, its funding, privacy matters, time estimation, permission to record interview and of course a 'thank-you'. The subject of the questions in the interviews were linked to the central variables of the research, and what the researcher had heard and wanted to verify. The topics of the interview depended on the time of the interview. In the three military cases interviews were conducted before the deployment, during the deployment and after the deployment. Before the deployment the questions were about expectations, past experiences, how the cooperation was coming along now, current team spirit, relations, and communication. These questions gave the researcher an idea of the 'baseline' of the study.

The main variables that were studied in the original study were: strength of MTS identity and component team identity; MTS/component team Leadership; MTS/component team orientation; MTS/component team level mutual performance monitoring; MTS/component team level workload sharing; MTS/component team level adaptability; MTS/component team level trust; MTS/component team shared mental model; and MTS/component team level closed-loop communication.