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Microscopic relational analysis: a method for researching the teacher-student relationship

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ABSTRACT
During the last decades, a large body of research has contributed to knowledge on the teacher-student relationship (TSR). However, more research is needed regarding TSR as constructed in interaction and on developing methods for investigating such processes. This paper outlines a method for detailed, close interpretation and analysis of TSR, tentatively labelled ‘Microscopic Relational Analysis’ (MRA). It discusses MRA’s relevance to studying TSR and how MRA can be conducted. The following five themes and principles are discussed and illustrated through previous and ongoing studies: (1) MRA focuses on TSR as a dynamic phenomenon, a social bond that continuously changes in interaction; (2) MRA explores connections between TSR and the microworld of the classroom, i.e. social processes beneath the surface of interaction; (3) MRA implies oscillation between smaller parts and greater wholes; it includes meticulous transcriptions of interaction, and interpretations about qualities of TSR; (4) MRA acknowledges teachers’ and students’ subjective experiences in TSR, i.e. their thoughts, feelings, and intentions; (5) MRA primarily uses video recordings; such material enables detailed descriptions, analyses, and interpretations of TSR as built sequence by sequence in interaction. Implications for researchers, teacher educators, and in-service teachers are provided.

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Introduction
The concept of social relationship is crucial in social science, but, as Scheff (1997) states, it usually ‘goes without saying’ (69). In educational research, it is often assumed that relationships between persons are significant, but the concept is rarely elaborated upon or discussed. The teacher-student relationship (TSR) is the focal point of analysis here. This study aims to contribute to the steadily growing field of TSR research.

Over the past three decades, approximately, research has examined how TSR influences education, including students’ social development, well-being, and academic performance (Hughes 2012, Roorda et al. 2017, Sabol and Pianta 2012, Wubbels et al. 2012). Moreover, research has shown that ‘relational competence’ (Aspelin and Jonsson 2019) – ‘interpersonal skills’ (Sabol and Pianta 2012), and ‘interpersonal competence’ (Wubbels and Brekelmans 2005) – are fundamental components of teacher professionalism. Quantitative research dominates the field – statistical analyses are applied to measure correlations between relationships and other variables, for example, student learning (Cornelius-White 2007, Ewe 2019, Nordenbo et al. 2008). Such research generally
contributes little knowledge of local contexts and individuals’ experiences in ongoing interactions, aspects in focus here. Qualitative (e.g. García-Moya et al. 2020, Raufelder et al. 2016) and mixed methods research (e.g. Thornberg et al. 2020) often explores TSR’s implications for education, specifically student performance and engagement. In parallel, theoretical research with TSR itself as the focal point has also emerged (Biesta and Stengel 2016, Bingham and Sidorkin 2004, Noddings 2013).

Scheff (1997) states that research on relationships often refers to abstract ideas about social behaviour rather than to connections between actual persons. In contrast, he suggests a search for the least possible abstractness, arguing that we should ‘put the discourse that constitutes a relationship under a microscope’ (69). To supplement other approaches, Scheff (1997) recommends in-depth analysis of relational processes and highlighting ‘the living present … to breathe life into our enterprise … ’ (16). Although research on TSR is a growing field, as Hagenauer and Volet (2014) note, gaps exist regarding situative interactions and their implications for TSR. Hagenauer and Volet (2014) also point to a need for developing ‘… methods that can capture the complex dynamic and context-specific phenomena under investigation’ (384). The present paper aims to contribute to these aspects by outlining a method for microscopic analysis of TSR.

Building on Scheff’s social psychological framework (1990, 1997), which has rarely been adopted in educational studies (cf. Beaulieu 2016, Klusemann 2017), this paper focuses on close and detailed analyses of TSR in face-to-face encounters using a method tentatively labelled ‘Microscopic Relational Analysis’ (MRA). This paper concerns both methodology and method. Accordingly, discussions on why MRA is a relevant approach for studying TSR and on how MRA research can be conducted are presented, guided by five themes or principles. These discussions are elucidated by examples from micro-studies conducted by the present author and colleagues over the last 25 years. These examples were chosen not to prove the correctness of MRA but to illustrate its plausibility.

### Theme 1: a relational framework for TSR

Buber (2002) contrasts relational ontology with both individualism and collectivism: ‘… if individualism understands only a part of man, collectivism understands man only as a part: neither advances to the wholeness of man, to man as a whole’ (237). MRA assumes that ‘relation’ defines the fundamental condition of human existence (Buber 2002, Gergen 2009, Scheff 1990). To take a relational perspective means considering individuality and sociality as twinborn (Pfuetze 1973) and interconnected (von Wright 2006). The focus is thus not on individuality and sociality as separate entities but on the ‘slash’ between two poles, such as individual/society (Asplund 1983) or ‘I’/ ‘Me’ (Mead 1947).

Here, we speak of TSR in terms of ‘the social bond’ (Scheff 1990), a phenomenon that exists in interpersonal encounters and connects persons to one another. Thus, we do not distinguish between ‘contact’ in the sense of a ‘momentary experience related to an encounter in the here-and-now’ and a ‘relationship’ ‘which develops over time’ (Karpouza and Emvalotis 2019, p. 134). Scheff (1990) proposes ‘… the need for a new language, based on models of bond-relevant behavior … ’ (19). According to Scheff (1990), modern societies are characterized by bonds being constantly in motion and tested. Bonds are built in verbal and nonverbal communication, and their quality largely depends on the degrees of mutual understanding and deference between interactors (i.e. those who interact). Strong bonds are built through high degrees of mutual understanding and deference, that is, through cognitive and emotional ‘attunement’ (cf. Stern et al. 1984). Low degrees of attunement imply damaged or threatened bonds. Scheff (1990) also emphasizes the role of emotions in interaction. Building on Cooley (1992), he argues that ‘pride’ and ‘shame’ are the primary social emotions, as they provide immediate signals to the social self about bond quality.

Thus, in MRA, TSR is located in shared spaces between teacher and student (cf. Biesta 2004). This idea is illustrated by the following excerpt, taken from a micro-sociological study on teaching in high school classes (Aspelin 2015).
The subject is public speaking, and the teacher wants students to reflect on their earlier presentations:

17.25. **Teacher:** Do you remember what we had to improve? We brought up plus and minus. Do you remember what, what you weren’t so good at? Magnus? Er … Johan!

17.37. **Johan:** Er … especially when we read: take pauses

17.41. **Teacher:** Yes! Exactly. You were too fast. So: take pauses. And more? Er … Maria?

17.50. **Maria:** More body language

17.51. **Teacher:** Yes! Body language. This time we don’t allow anyone to sit. Now, you’ve got to try thinking about body language because …

17.59. **Jacob:** We got to …

17.59. **Teacher:** … now you have things to express

18.00. **Jacob:** … we got to have a higher such thing [points at the teacher’s desk] so that we can stand like this [pretend to be a lecturer]

When studying teaching – particularly TSR – we can focus on the teacher’s position (e.g. in terms of classroom management), the students’ positions (e.g. in terms of learning), on social structures (e.g. in terms of frame factors) (Aspelin 2020, Biesta 2017, White 2011), or some combination. TSR is constructed in institutions with certain aims regarding students’ academic learning and social and personal development – within these institutions, teachers use different methods to guide students’ achievement and development along those lines. Any analysis must be informed by the larger, educational contexts in which TSR is built. However, in applying the relational framework, we mainly focus on ‘an ongoing social process of experience and behaviour …’ (Mead 1947, p. 82). Teachers and students are seen as subjects who respond to one another and are set in motion in relation to one another. A teacher’s verbal utterance is followed by a response from a student, which in turn is followed by the teacher’s response, and so on. However, the relational concept becomes more palpable if we zoom in on the details. Here, Jacob interrupts the teacher’s talk, and then the following takes place:

18.00–

18.02. The teacher rapidly moves her hands together and turns her head and shoulders around. Jacob leans forwards with head and body in the teacher’s direction and starts smiling. Next, the teacher moves her body forward again, shaping her lips into pure smile. Finally, the teacher and Jacob meet in mutual smiles.

18.04. **Teacher:** Yes, get ourselves a real rostrum. Yes, we can have that later when we … You know, we will continue with rhetoric, so you could end up holding speeches in the assembly hall!

18.13. **Jacob:** Eh, no thanks.

The teacher and Jacob seem to perform lightning-quick readings of each other’s minds, sequence by sequence. They each take the role of the other (Mead 1947) and rapidly shift between observing and reflection on behavioural markers. What the teacher expresses means something to Jacob, and vice versa, in an ongoing interpersonal flow. The extremely up-close observation of what occurs between 18.00 and 18.02 shows the bond between Jacob and the teacher being threatened when Jacob takes the initiative. However, immediately thereafter, the two interconnect. The mutual smiles at 18.02 indicate high degrees of attunement. The bond is re-built in a flash through what the interactors say, *how* they say it, and how they act, in terms of both linguistics and manner. To understand TSR’s qualities, we need to acknowledge verbal conversations, words, and sentences and, in particular, non-verbal communications such as facial expressions, paralanguage, and gestures.
Given the outlined relational framework, the MRA researcher should document data enabling detailed teacher-student interaction descriptions and social bond analyses. Preferably, data should also enable studies of the classroom microworld.

**Theme 2: TSR and the microworld**

As teachers, when we teach, we focus on topics, organizing and managing lessons, and promoting students’ learning. Beneath the surface of classroom interactions exist social processes that we do not often reflect upon but which tangibly impact our actions, thoughts, and feelings. MRA acknowledges this ‘microworld’ (Scheff 1990) which, presumably, is greatly important to the quality of teaching.

Scheff (1990) sees the microworld as a black box in research. At first glance, this realm seems mysterious; spontaneously, we may even question if discussing processes ‘beneath the surface’ is reasonable. Gradually, through adequate and appropriate techniques and connecting research to well-defined theory and methodology, the microworld becomes accessible (Scheff 1990). To succeed in gaining access, we must mentally shift gears and temporarily abandon the attitudes of everyday life. Scheff (1990) distinguishes between ‘explicit’ and ‘implicit’ ‘social order’. The explicit is the world of appearances (or ‘performances’ [Goffman 1990]) and the implicit is the world beneath appearances. Scheff perceives the microworld as part of an implicit order which is built up with huge numbers of impressions and responses. Every second of a social gathering is loaded with meaning; every exchange – one individual’s action plus another individual’s response – is a ‘microcosm’ (Scheff 1997, p. 203). There is a microworld underlying social interaction which ‘... connects individuals in shared meanings and feelings and also connects them to the social structure of their society’ (Scheff 1997, p. 190). In MRA, the researcher usually zooms in on exchanges but also zooms out to other relevant aspects – from a particular TSR to particular institutional contexts – and moves back and forth rapidly between levels.

An ordinary school lesson involves multifaceted networks of relationships. Teaching is usually conducted in a classroom where a teacher and 20–30 students are gathered. Hundreds of combinations of relationships are possible within this group of individuals (i.e. between individual A and B, A and C, B and C, and so on). If we add relationships between teams or groups in the class, thousands of potential relationships can be counted. With methods such as ‘social network analysis’ (Bokhove 2018), researchers can show frequencies of verbal interaction in classrooms and how interactors are physically interconnected. However, as will be discussed, to gain in-depth understanding of TSR, we should highlight nonverbal connections as well as interactors’ subjective perspectives. Additionally, we should connect these aspects to what occurs beneath appearances. For example, sometimes, the expressions we ‘give off’, that is, express unintentionally and mostly nonverbally, as teachers contradict the expressions we intentionally ‘give’ (Goffman 1990, p. 14). The behaviour of every individual influences the behaviour of every other individual, and vice versa. In every given moment, the TSR is set in motion and changes character. MRA research includes exploration of connections between the TSR and the microworld of the classroom.

The following MRA of the TSR in a video-recorded lesson in a high-school class (Aspelin 2006) focuses on exchanges between a teacher and a student called ‘Lasse’. The data is from an ethnographic project which followed two high-school classes and their teachers (three from each class) over two semesters (Aspelin 1999).

The subject is civics, and the topic is alcohol and drugs. The teacher asks a series of vague questions: ‘And how much is that, roughly, 1,8% alcohol? How much strong beer could that be? Is there someone who knows?’ A student answers ‘Two cans’, which makes little sense. Nonetheless, the teacher confirms: ‘About two cans’, and continues as if everything is in order. Then, Lasse objects: 8.01. **Lasse**: What? He turns to the teacher, speaking quietly. The teacher arranges papers. He raises his head and turns to Lasse. He opens his mouth as if intending to answer but then presses his lips together.
8.03. **Lasse:** What, what do you mean? He still speaks quietly. He turns his left ear toward the teacher. The teacher is still looking at him and arranging papers. Once again, the teacher opens his mouth and then quickly closes it.

The exchange is interpreted as Lasse questioning the teachers’ actions and the teacher being ambivalent about how to respond, as expressed through the opening and closing of his mouth. Next, the teacher presses the stack of papers against the desk. Immediately after, the following occurs:

8.05. **Teacher:** I beg your pardon? The question is uttered succinctly. While formulating the words, the teacher presents Lasse with a neutral (motionless) face. His lips are pressed together. Lasse quickly lowers his gaze and looks down at his desk.

8.06. **Lasse:** Ah, never mind. Lasse still looks down. The teacher’s non-verbal expressions are unchanged.

8.07. **Teacher:** Yes. This statement directly follows Lasse’s turn. The teacher’s tone is short; his non-verbal expressions remain unchanged. Lasse still looks down.

On a superficial level, the teacher is asking Lasse to repeat his question. However, the ‘message stack’ (Scheff 1990) of implications in his manner points elsewhere: it is interpreted as a call for resignation, which Lasse heeds. On one level the TSR is stabilized; the interactions that follow seem well organized. On another, underlying level, the social bond between the teacher and Lasse is threatened.

Although MRA’s focal point is teacher–student exchanges, it also explores connections between exchanges and social contexts. The above-mentioned study (Aspelin 2006, 1999) contains detailed transcripts of classroom interactions for the whole lesson, including descriptions of the verbal and non-verbal behaviours of all students. Overall, the project pointed to two relationship-building dimensions: a surface dimension where participants give impressions of accepting one another and a more non-conforming dimension beneath that surface. At minimum, MRA studies of TSR should include insights into a particular microworld’s dynamics. However, larger datasets are desirable for investigating the different parts and wholes of relevance to TSR. This topic is explored further below.

**Theme 3: parts and wholes: interpretation of TSR**

In MRA, interpretation is the key approach to human behaviour, interaction, and relationships, for example, TSR. Scheff (1990) argues that the meanings of words and gestures are always ambiguous and that signs and symbols are incomprehensible without consideration of context: ‘Unlike the expressions of all other living creatures, the meaning of human expressions is not fixed; it only indexes a relationship between the expression and the context in which it occurs’ (37). All interpretation, however carefully conducted, is approximate. Interpretation here means a reasonable and plausible statement about what certain exchanges imply for a TSR and vice versa. However, an exchange or an individual’s expression is always part of a greater whole, which in turn is part of an even greater whole, and so on – like a Russian doll.

Scheff (1990) provides a more precise definition of interpretation:

If we consider the signs to be interpreted in a conversation to be the words and gestures, an interpretation would be the implicature, a verbal statement of the implications of the words and gestures which were not expressed in words by the interactants. (41).

Larsson (2005) states that interpretations are built up from interplays between parts and wholes: the parts give meaning to the wholes, while the meaning of every part is connected to the meaning of a whole. We cannot fully understand a particular whole – for instance, a TSR – from single episodes; knowledge of small events is needed to understand the greater wholes of which they are parts (Scheff 1997). The goal of MRA is to present substantiated, meaningful, and plausible interpretations of what takes place in social gatherings. Such presentations are preceded by huge numbers of quick movements between parts and wholes. The researcher can never claim objectivity about the veritable
truth of what has happened in observed situations. There is not now and never will be a technical manual for determining the meanings of social behaviour. However, the more signs that point in a certain direction, and the clearer the links between parts and wholes, the more plausible the analysis.

Teachers and students never act in a vacuum. The more we consider connections between exchanges and their contexts, the more we can understand TSR. Here, ‘context’ refers to the current interaction, relationship, situation, group, and institution. Scheff (1990, 1997) states that every part of an interaction implies a larger whole. In The Blackwell Encyclopedia of Sociology, Scheff (2007) describes his method as follows:

Using transcripts of verbatim texts as data, one interprets the meaning of the smallest parts (words and gestures) of expressions within the context of the ever greater wholes within which they occur: sentences, paragraphs, the whole dialogue, the whole relationship, the whole culture and social structures (…).

More specifically, Scheff (1990) suggests that the researcher swings back and forth from text to context and moves up and down on a ‘part/whole-ladder’ (190). The further up the ‘ladder’ we get, the more abstract the analysis. Analyses concerning TSR’s extended context, for example institutional aspects, necessarily lack the precision achievable by studies of interaction. MRA should consist of very detailed verbal and nonverbal communication data – single words and gestures, sentences, exchanges, and conversations. Optimally, the researcher also has access to historical data on the relationships and the participants’ biographies. Additionally, conceptions from more abstract (societal) levels, for example concerning conventional roles such as teacher and student, could be adopted for concrete cases (Scheff 1990, 1997). That said, for pragmatic reasons, the researcher must usually concentrate on certain analytical steps. The focal point of MRA is exchanges and their implications for interpersonal relationships.

In a study aiming to examine TSR and teachers’ relational (in)competence, 30 s of a video-recorded lesson were analysed microscopically (Aspelin 2017). Analysis of the lesson showed that the verbal communication was largely structured by the teacher’s questions and the students’ answers (the so called I-R-E structure, see Bellack et al. 1966) and that the students’ non-verbal communication was highly disciplined by the teacher’s definition of the activity. However, one student, called Alice, challenges the teacher’s definition, mostly by turning to a peer.

The teacher says almost the same sentence over and over and uses different non-verbal means to discipline the student(s). Alice, however, continues to oppose, and at the end of the episode, for the first time in the lesson, she takes a verbal initiative:

29.14. **Alice:** We can recite it in chorus now: one, two, three! Alice faces the teacher with a smile. The teacher’s lips are straight at first, but then she also starts to smile.

Alice’s verbal utterance implies that the teacher has repeated her phrase so many times that the class could perform it in unison. The teacher’s initially straight lips indicate that she has not yet decided how to perceive Alice’s action, but her following smile gives the impression that she will not push her position any further.

29.16–

29.18 **Teacher:** One, two, three! The teacher broadens her smile, revealing her upper teeth, and tilts her head slightly backwards. She is moving her hand up and down, in time with the words. In the next moment she rapidly tilts her head down towards the desk in front of her, up towards the left side of the classroom, towards the ceiling to her right, and, finally, straight ahead. Alice has raised her head and faces the teacher. Her mouth is open in a smile and her teeth are visible. She whispers something to herself when the teacher speaks.

In sharp contrast to her previous controlling and self-controlled manner, the teacher looks distracted. Her behaviour is interpreted as resignation. At the same time, Alice’s behaviour (raised head, facing the teacher, smiling) indicates a strengthened position in the relationship and in the teaching situation more generally.
Zooming in on Alice and the teacher’s smiles in 29.14, we could say that those smiles indicate a turning point in the power struggle that has been waged for most of the lesson and that the student now, for the first time, has gained the upper hand in relation to the teacher. That interpretation of their smiles includes knowledge of their greater wholes. For example, we consider how the smiles are related to what happened before the smiles, to what happened after the smiles, and to what happened in the lesson as a whole – including how the other participants act (in the episode and during the whole lesson), how this particular TSR appears against the total data material, what characterizes the social life of this school class and the teacher’s relationship to the class, how the teacher usually teaches, and that the episode takes place within institutions with certain purposes and expectations. Such layers are woven into the interpretations of single utterances and contribute to understanding exchanges. Interpretations of certain parts are thus based on initiated, situated knowledge of contexts at different levels.

MRA researchers, like any other researchers, should carefully consider the plausibility of interpretations and conclusions. Interpretations can always be re-interpreted, and as researchers we always present one of many possible versions. However, it would be just as unreasonable to say that interpretations are arbitrary and simply based on subjective opinions as it would be to speak of interpretations of human conduct as facts. Interpretations are always more or less substantiated and plausible. A motto for MRA is to present meticulous, trustworthy interpretations of what happens in an episode in focus. This is indeed a time-consuming enterprise. For example, the MRA of the lesson discussed above took nearly a month to conduct. Claims about a certain whole, such as a TSR, should be based on thorough interpretation of its local context as well as of the parts that comprise it. Furthermore, interactors’ individual perspectives are essential parts of the TSR.

**Theme 4: TSR and the individuals’ perspectives**

From the relational standpoint, ‘relation’ is located between two persons, not ‘... as is customary, either within individual souls or in a general world which embraces and determines them...’ (Buber 2002, p. 241). This conception implies that there are two sides to the phenomenon and that if either side was missing, it would not be meaningful to talk about a relationship. An important principle for MRA studies is to highlight participants’ subjective positions and their agency, that is, how they respond, think, and feel at virtually every moment of interaction.

Scheff (1990, 1997) argues that the study of microworlds should not be fixed on outer behaviour. His research is part of the interactionist tradition, with roots in Mead’s (1947) theory, where the individual’s position in relationships is emphasized. Another important theoretical source for Scheff’s works is Goffman: ‘Of all the social theorists, the one who came closest to confronting the reality of the microworld was Goffman’ (Scheff 1990, p. 28). However, Goffman (1982) proposes that the proper study of interaction is ‘not men and their moments … rather moments and their men’ (3). In another classic study, Goffman (1990) describes the self as a product of social arrangements: ‘In analysing the self, then, we are drawn from its possessor (…) for he and his body merely provide the peg on which something of collaborative manufacture will be hung for a time’ (245). Scheff (1990, 1997) differs from Goffman, his predecessor (and old teacher), by emphasizing both moments and men. Microscopic analyses include drawing conclusions about interactors’ internal processes, their thoughts, feelings, motives, intentions, and strategies. In this respect, Scheff’s approach also differs from conversation analysis (CA) which, according to its founders, aims at rigorous, empirical, formal studies of social actions and interactions (Schegloff and Sacks 1975). Like CA, Scheff’s program contains meticulous, detailed analyses of interaction in authentic settings, documented with video and/or audio recordings. CA research primarily focuses on outer behaviour and investigates how conversations are organized. As Hagenauer and Volet (2014) note, CA does not usually focus on the qualities of the TSR. In contrast, Scheff (1990) emphasizes individuals’ constant and often extremely rapid search for what words and gestures mean and what
expressions imply for the ongoing building of social bonds. He aims to study: ‘... discourse as the lived experience of the participants’ (1990, p. 30). Such research cannot be entirely rigorous, empirical, and formal.

Thus, the MRA researcher intends to understand the ongoing interaction from the participants’ perspectives and interpret implications for TSR. As participants, we are not usually aware of the total ‘message stack’ (Scheff 1990) of interaction. Therefore, the researcher should consider implicit messages, that is, what is implied in words and gestures without being expressed in words. Utterances and exchanges are loaded with meaning, with meta-messages, regarding relationships. The MRA researcher’s task is to take the perspectives of both teacher and student and carefully interpret and represent their changing subjective positions in relation to one another and to others.

In Nilfyr et al. (forthcoming), we focus on social adaptation in teacher–child interaction during a goal-oriented activity at a preschool and discuss how such adaptation can be understood in light of the institutional contexts of contemporary early childhood education. The study uses data from a project that captured 173 min of video from three different preschools and in which seven teachers and 35 children aged 3–6 years participated (Nilfyr 2018). Episodes were selected for micro-analysis, as they highlight the interactional patterns identified in the previous study. A brief excerpt is presented below.

One teacher and four children, all about four years old, sit at a table in the preschool’s atelier. The children have been instructed to draw a tree, but one child, called Elof, draws a Santa. Several times, the teacher tells Elof that he is supposed to draw a tree. According to our analysis, the main theme in the episodes is that Elof gradually adapts to the teacher’s definition of the activity. We explore what characterizes interaction which leads interactors to conform, even when they do not wish to (Scheff 1990). Just before the following exchange occurs, the teacher asks Elof what he is drawing, and Elof answers: ‘To my mother’s house, take home’.

13.44–13.47 Teacher: Uh The teacher twitches her head. She leans forward with her fingers against her chin and looks at Elof. The teacher smiles slightly, then turns to one of the other children to move a jar of water.

13.46–13.50 Elof: I don’t want to, I don’t want to paint anymore Elof looks at the teacher and then down at his drawing. He glances at the teacher when he initially says ‘I don’t’. Then his gaze is lowered. When he says ‘anymore’ he quickly glances at the teacher and lowers his eyes again, holding the brush in his hand.

The teacher responds with hesitation when Elof says ‘To my mother’s house’. This response is interpreted as insecurity about how to handle the situation (Elof’s refusing to follow her instructions) and also as a signal to Elof that he is doing something that the teacher dislikes. Our interpretations of the previous course of events showed that Elof was affected by the teacher’s negative sanctions and tried to escape from the activity (Nilfyr et al. 2021). This was confirmed by Elof’s verbal response in this sequence. Elof’s lowered and averted eyes are interpreted as expressions of shame (Retzinger 1991); they indicate that the bond between Elof and the teacher is threatened (Scheff 1990). In the events that follow, Elof, step by step, adapts to the teacher’s definition. Following Scheff’s (1990) concept of ‘deference-emotion systems’, referring to informal and subtle systems of social sanctions, Elof’s social adaptation is interpreted as a search for reparation of the threatened bond, a process in which emotions play key roles. In-depth, sequential analysis of participants’ perspectives of the ongoing interaction suggests that Elof conforms to the interaction order in search of respectful contact with the teacher and to avoid feelings of shame. These findings suggest that goal-oriented approaches to teaching can overshadow relational quality.

Therefore, to obtain a concrete, profound understanding of a TSR, we should interpret individuals’ thoughts, feelings, and the indications when assessing the quality of social bonds.

**Theme 5: video and TSR**

Empirical research on TSR includes choosing appropriate data collection methods. The researcher can, for example, distribute a survey to a large sample group of teachers and students and interview
them about how they perceive TSR. The researcher can also observe lessons, take notes on classroom interaction, and explore implications for TSR. Moreover, the researcher can participate in school for as long as desired, talk to teachers and students about TSR, observe formal and informal activities, and collect relevant documents. However, it is hardly controversial to say that the most appropriate method for studying TSR is through video documentation.

Movements in the classroom are often extremely quick. In an ordinary class, voluminous subtle events can escape the notice of even participants and observers with well-trained eyes. ‘Observing the microworld requires a microscope …’, Scheff (1990) argues (28). With video-recordings, the researcher can come closer to understanding what takes place beneath the surface of social practices. The researcher obtains access to events and can view them repeatedly from different angles, e.g. from the perspectives of the teacher and the different students. New phenomena can be discovered with each new viewing. Moreover, video recordings enable colleagues to assess if analyses are reasonable and contribute new observations and interpretations, which in turn strengthens a given study’s soundness. In that vein, while MRA studies can certainly be conducted by individual researchers, a team of two or more researchers engaged especially in data management and interpretations is usually preferable. Even given multiple researcher-observers’ perspectives on video-recorded interactions, we cannot assume that our recordings are identical to what actually happened. Video data – like all empirical data – is always inferior to the reality which it only to some extent captures, and we can always assume important information is lost. Analysis is limited to targeted objects and recorded sounds. Certainly, video recordings, unlike other data, are representations of ongoing events, but they are nevertheless reconstructions (Jordan and Henderson 1995). In fact, as Blikstad-Balas (2017) states, behaviour captured on video is not even data in and of itself but only becomes data as the subject of analytical activity.

Blikstad-Balas (2017) identifies two risks associated with video research. First, researchers can come too close to the data and lose understanding of its contexts; this is the risk of magnifying events without having considered typical patterns from a larger body of data. Second, researchers can become too distant from the observed activities and lose important details. This is the risk of over-focusing on larger trends in data without noticing particularities. That is, when analysing video recordings, one risks getting lost in enormous numbers of concrete details and ‘of converting abstractions into realities’ (Scheff 1990, p. 36).

Video recordings create opportunities for very close descriptions, analyses, and theoretical interpretations of the TSR, as built sequence by sequence. By studying interaction frame by frame – one frame is about 1/26 of a second – the researcher can analyse connections between individuals’ utterances and the greater wholes in which they are embedded. This is certainly an advantage if the researcher has access to video data from different lessons and classes. The MRA researcher could begin with video recordings of many lessons and explore typical patterns regarding TSR and how these connect to the institutional contexts in which they occur and exist. Next, the researcher could select episodes that highlight the identified patterns and apply MRA. Studies of single cases, such as a certain classroom setting, could also prove valuable. MRA researchers search for metonyms in the video data, for parts significant to greater wholes, for instance, an episode signifying a particular TSR. In MRA, no claims are made of representativeness in a positivistic sense. The distinctive feature is microscopic insight, not overview or generalization.

In a project in progress, the present author and a colleague use video data to examine teachers’ relational competence as manifested in relation to elementary school students with neurodevelopmental disorder (NDD) symptoms. Seven lessons with different teachers were documented using two video cameras. All video recordings will be observed several times by both researchers. Next, all interactions between teachers and students with NDD will be transcribed verbatim, followed by preliminary analysis of TSR patterns. Finally, we will thoroughly analyse verbal and nonverbal interaction in typical episodes to explore what characterizes the teachers’ relational competence in relation to students with NDD. This last step is crucial: MRA research should provide substantiated
and plausible interpretations of particularities. The other steps are also important for placing single cases in context and mitigating the risk of magnifying events. Those steps form a basis for discussions of TSR in a wider sense.

**Discussion**

The aim of this paper is to outline a method for microscopic analysis of TSR. This paper has looked at why MRA is a relevant approach for this task and at how MRA studies could be conducted. According to our arguments, MRA contributes to TSR research by providing a means of obtaining in-depth knowledge of TSR in social practice. In Hagenauer and Volet’s (2014) words, MRA is designed to ‘capture the complex dynamic and context-specific phenomena under investigation’ (384).

**Critical reflections**

The more in-depth the analysis of the verbal and nonverbal interaction, the more plausible the interpretations of the TSR will be. Emphasis on relational particularities is the main strength of MRA. The approach does have limitations. One, even if MRA stresses the individual perspective, interactors’ own versions of what occurs tend to be excluded. To strengthen its validity, MRA could be supplemented with methods that focus on individual voices, for example, stimulated recall interviews with teachers and students who watch video recordings of their teaching-learning sessions (see, e.g. Ljungblad 2016). Another limitation concerns institutional context. As acknowledged, teaching takes place within complex institutional structures that frame and regulate activity. Understanding a particular TSR necessitates consideration of the larger contexts which exert pressure on the interactors. As indicated above, ideally, the MRA researcher collects not only data on single words and gestures, interactions, and relationship histories but also data enabling discussions of educational structures. When the microworld is in focus, there is often a risk of neglecting larger contexts. The more space the microscopic analysis takes up, the less is left for discussions on other levels. One obvious limitation involves presentation of findings; space limitations can make application of MRA to large amounts of data and inclusion of data forms other than videos and transcripts impracticable. MRA is thus primarily, but not solely, an approach for studying TSR in situated contexts. This challenge is discussed more below.

**Implications for research and practice**

During the last few decades, research with different theoretical frameworks and methodological approaches have contributed to knowledge on how TSR affects education. Quantitative, extensive, studies show general connections between TSR and students’ learning and development, while qualitative, intensive studies explore the meanings and implications of TSR. In the interest of conserving space, the present paper compares MRA with other approaches to a limited extent only. However, we note that MRA should be regarded as supplementary to other approaches rather than contradictory.

Scheff (1990, 1997) speaks of micro-studies as a step between qualitative and quantitative methods. With or without initial qualitative exploration, the researcher microscopically examines single cases, such as verbatim texts, placing them in the widest possible context. Based on such micro-studies, the researcher can present hypotheses for verification by quantitative means, and thereby the extent of the relational patterns discovered via MRA can be examined. MRA can be used to investigate if and how relational patterns emerging in qualitative studies are reflected in the microworld. MRA can also be conducted separately: analysing and comparing episodes in certain educational contexts can provide in-depth knowledge of how the TSR manifests in practice. As elaboration on theoretical implications is prerequisite to such single-case studies being scientifically valuable, the researcher should discuss the plausibility of the chosen theory. Though the
present paper is primarily based on Scheff’s social psychology, numerous other general theories may become relevant when studying TSR.

This suggests two ways of explicitly connecting MRA-studies and their extended contexts. First, analyses of single cases can be held against previous MRA-studies on TSR and other research on the topic to expand the relevance of findings. In this way, institutionally-based dynamics and influences – as experienced by the participants – can be elucidated. Second, as indicated above, MRA-studies must be based on adequate relational theory. Validated conceptual frameworks can be adopted to theoretically substantiate interpretations of TSR in moment-by-moment elements of interaction.

As illustrated in this paper, MRA can be used to explore TSR, as manifested in teacher-student interaction. It can also be used to promote teachers’ professional development. In a series of intervention studies (e.g. Aspelin and Jonsson 2019; Aspelin et al. 2021; Ewe and Aspelin 2021), we purposed to enhance pre-service and in-service teachers’ relational competence. Participants were asked to analyse the TSR, as depicted in short video sequences before and after an intervention. The intervention comprised access to explicit criteria – based on Scheff’s theory – for analysing relational competence. Further, we modelled using the criteria by presenting a brief MRA of an episode from the commercial movie Precious (Daniels 2009).

The modelling part of the intervention focused on interpreting details in a classroom interaction between a student called Precious (the film’s protagonist) and one of her teachers. Our intention was that participants, through access to explicit criteria, would acquire a more complex and concrete understanding of TSR and relational competence. The findings suggest that their perceptions changed radically. In the pre-tests they focused on factors such as teaching strategies and social structures that frame teaching. In the post-tests they focused on interpersonal relationships and perceived relational competence as fluid phenomena between teacher and students. Participants’ perceptions also changed from rough, ‘structural’ explanations to relatively detailed and nuanced analyses of teacher-student interaction. Such studies indicate that MRA can be used to promote teachers’ understandings of TSR.

‘Teaching is complex’ seems a vast understatement to someone who has spent thousands of hours studying the microworld of the classroom. An ordinary lesson is built up by a huge number of actions and interactions, an astonishing myriad of events. The network of relationships is immensely multifaceted. From this perspective, many statements about school, e.g. in media and in research, seem greatly simplified. Lessons take place on official levels, where explicit social influence exists, and on unofficial levels, where influence is mostly implicit. As teachers and students, we largely lack insight into the microworld of the classroom. As teachers, much of our professional knowledge is implicit and embodied. Furthermore, teaching inevitably contains influences that are implicit, informal, and largely hidden from the naked eye. While teaching, teachers should not pay much attention to these processes. They should instead focus on the topics and on students’ content learning. Teaching is ‘such goal-directed processes that, under guidance from teachers or preschool teachers aim at development and learning through the acquisition and development of knowledge and values’ (Education Act 2010:800, 1 chap. 3 §). As MRA researchers, we should consider education’s formal purposes. However, we should also observe phenomena that are not at the centre, or even on the periphery, of practitioners’ consciousness. The present paper argues that research into the microworld could provide knowledge on seldom recognized dimensions of teaching. As such, MRA could be valuable for teachers seeking understanding of how positive and supportive relationships are realized – or hindered – in situative practice. MRA studies imply that TSR is not built on standardized techniques a teacher uses in the same way in every situation or that every teacher uses in contact with every student. On the contrary, the studies highlight TSR as built by sensitive and responsive approaches, in particular contexts.

In the Covid-19-pandemic era, it seems appropriate to comment on online TSR. In a project in progress, the present author and a colleague explore university teachers’ relational competence
as manifested in online teaching. We video-recorded and transcribed interaction between teachers and students in online classes and identified various patterns in teachers’ actions that support TSR. Next, we will conduct in-depth analysis of TSR in typical episodes. Online TSR is indeed a field in need of more research, and we suspect that MRA could be used in this context as well.

**Conclusion**

This paper discusses and illustrates the following five main MRA themes.

1. MRA understands TSR as a dynamic phenomenon, a social bond which exists, and continuously changes between teacher and student. ‘Relation’ is thus regarded as the foundation of education and not just as a teacher-managed phenomenon the teacher aims to develop.

2. MRA focuses on TSR as built in verbal and, especially, nonverbal interaction. An ‘exchange’ is the basic unit of analysis that reveals TSR as related to complex relational networks that constitute teaching/education. TSR relates to subtle flows of behaviours, thoughts, and feelings beneath the surface of classroom interactions.

3. Interpreting connections between parts and wholes is MRA’s key method. Credible interpretation of TSR include meticulous, sequence by sequence transcriptions of interaction and conclusions about implications for social bonds. The researcher oscillates between text and context and interprets shifting relational qualities. Episodes are related to their social contexts on different levels.

4. MRA acknowledges participants’ subjective experiences. It is not enough to describe what teachers and students say and do together and/or the structure of the interaction; we must interpret their thoughts and feeling during interaction, their intentions, motives, and strategies.

5. Video recordings are the most appropriate materials for MRA, enabling detailed descriptions, analysis, and interpretations of TSR, as built sequence by sequence in interaction. However, the video researcher should be aware of the risks of getting too close to or growing too distant from phenomena under study.

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