

## SITUATING NORMS AND JOINTNESS OF SOCIAL INTERACTION<sup>1</sup>

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**ABSTRACT:** The paper argues that contexts of interaction are structured in a way that coordinates part actions into normatively guided joint action without agents having common knowledge or mutual beliefs about intentions, beliefs, or commitments to part actions. The argument shows earlier analyses of joint action to be fundamentally flawed because they have not taken contextual influences on joint action properly into account. Specific completion of earlier analyses is proposed. It is concluded that attention to features distributed in context of interaction that signal expected part actions is sufficient for a set of part actions to qualify as a joint action.

**KEYWORDS:** Social Interaction; Joint Action; Status Functions; Norms

### 1. INTRODUCTION

People walk, dance, and sport together, as friends, family, colleagues, fellow citizens, and so on. Social interaction occurs everywhere—around dinner tables, in rush hour traffic, at work, and in train carriages. People coordinate actions, at red lights, in queues, and go to the ballot the same day. People are committed to action procedures in interaction, avoiding collisions, not pushing into queues, leaving space for hurrying ambulances, and so on. When we together perform actions by means of each performing a part we engage in *joint action*.

But under what conditions do sets of part actions qualify as joint action? I will review two camps of earlier analyses of joint action (sections 2 and 3). The important

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difference between them is what conditions they state about how agents' mental states must be related for their part actions to qualify as a joint action. According to some it is necessary that we have mutual beliefs about what part actions we intend to perform, about what is our goal, or about our commitments to perform certain part actions. Others reject the notion that such mental state relations are necessary, at least for some kinds of joint action. For some kinds of joint action it has been claimed that it is sufficient for sets of part actions to qualify as joint if agents realise that they cannot perform the whole action themselves and that they attend to each other in a special way. I find both camps fundamentally flawed and in dire need of completion.

I propose that context coordinates part actions. Specifically I propose re-evaluation of analyses of joint action in light of the 'proposition of situatedness' that, *agents acting together are necessarily situated in social contexts structured around rules, roles, and functions, which are signalled by objects distributed in context of interaction*. A consequence of taking the situated perspective is that the class of joint actions is wider than if restricted to common knowers, mutual believers, and joint attenders.

What about context of interaction? Echoing Searle, we assign status functions, which entail power relations, to objects and people and accept objects to count as indicators of such functions and power relations. We distribute functions and roles in social environs and invest objects with signalling functions about which actions are expected, which are the norm in the sense of being permitted or prohibited. The proposition of situatedness finds support in Searle's social ontology (section 4) and can be cashed out provided an understanding of how people attend to features of context of interaction that signal which actions are expected, the norm, and allowed or not allowed (section 5). That functions distributed in contexts of interaction influence joint action has repercussions for all earlier analyses of joint action.

## 2. MAXIMALISM

The first camp of analyses of joint action to be re-evaluated has been called 'maximalism' (Pacherie 2011). 'Maximalist analyses' refers to analyses that state as necessary for part actions to qualify as a joint action that they are performed either in common knowledge or mutual belief about intentions, goals, and reasons for action. The proposition of situatedness, properly developed, will show that part actions qualify as joint action without participants' mental states being related in ways stated as necessary by maximalists. It will also show that maximalism is inaccurate explanation of commitments' involvement in joint action. 'Maximalist explanations of commitments' involvement in joint action' refers to any explanation tying commitments' involvement in joint action to participants' mutual belief or common knowledge about intentions, beliefs, or commitments to part actions.

First question, *How can set of actions qualify as joint action without mental states being related in ways stated as necessary according to maximalists?* To see how, we need know more about maximalist necessary conditions for actions to qualify as joint.

The first necessary condition that characterise maximalism is common knowledge. Part actions  $x_1$  and  $x_2$  qualify as a joint action  $X$  if and only if they are performed from common knowledge. Common knowledge is necessary for agents to engage in joint action according to Gilbert (1989, 1990, 2001, 2003, 2006, 2007a, 2007b), Bratman (1992, 1993, 2009), and Miller (2007). According to these authors, agents have common knowledge of some fact if each knows the fact and knows that each knows the fact, and so on. What fact must be commonly known is, according to Gilbert (1989, p. 189) that both have expressed readiness to engage in joint action, or, in a way we will come back to, that they are jointly committed to a shared intention (2000, p. 22). According to Bratman (1992, p. 335) it must be common knowledge that both have uncoerced intentions to engage in joint action.

Weaker variants of maximalism states as necessary for part actions to qualify as joint action that part actions are performed from mutual belief about intentions and beliefs relevant for effectuation of the whole action (Tuomela 1993, 2005, 2006, 2007; Tuomela and Miller 1988; Haakli, Miller, and Tuomela 2010; Pettit and Schweikard 2006; Pettit and List 2011). If we replace 'know' with 'believe' in the above definition of common knowledge, then we have the maximalist definition of mutual belief. Pettit and Schweikard (2006, p. 23) say that it is necessary for actions to qualify as joint action that each agent believe that others intend to do their parts and that agents mutually believe that this is the case. Tuomela (2007, p. 112) says that it is a necessary condition that agents act partly because it is mutually believed that they jointly intend to perform the joint action.

By distinguishing two contexts of interaction we can now begin to glimpse the force behind the proposition of situatedness and why maximalist analyses of joint action should be re-evaluated. What will distinguish the two contexts is that in the first there is no object signalling what part actions are expected, while in the latter there is such an object. Suppose first you are out driving. The driver behind you starts flashing his headlights. You wonder what you are supposed to do—what he or she intends, what he or she believes you have not noticed, etc. Perhaps your boot is open, or your blinkers on. This is a confusing situation, and a maximalist can explain why: you and the driver behind you will have problems acting jointly or to appropriately coordinate part actions because your mental states are not appropriately related. But now suppose you notice that the car behind you is an ambulance. So you veer to let it pass. This is not a confusing situation. Why is action procedure suddenly not

confusing? The only relevant distinguishing feature is that in the latter situation your attention to certain features of context, e.g., car lacquer and coloured light, indicate appropriate action procedure. In the second situation you are able to coordinate part actions not because you know or have beliefs the contents of which refer to the other's mental states but because features of context signal what part actions are expected. This is as predicted by the proposition of situatedness. The example here is meant only to open for a point of entry of a situated perspective on joint action, a blind spot in maximalist analyses. Situatedness will be elaborated later on.

Second question, *Why is maximalism inaccurate explanation of commitments' involvement in joint action?* Let's review some maximalist explanations of commitments' involvement in joint action.

Some maximalists say that agents will be committed to part actions in joint action. According to Gilbert (2009, p. 179; cf. 2000, p. 18) "Members of some population P *share an intention* to do A if and only if they are jointly committed to intend as a body to do A," where it is necessary for joint commitment 'as a body' that agents under conditions of common knowledge have expressed readiness to be individually committed to the joint action (2007b, p. 10; 2009, p. 180). When one is committed in this sense one is expected to carry out the intention accordingly and not to change one's mind. Failure to do so gives others right to rebuke. Pettit and Schweikard (2006, p. 33) say that, "it is in virtue of their acting together that people are jointly committed to one another." Both explanations of commitments' involvement in joint action are thus maximalist explanations—commitments are involved only if there is common knowledge about commitments to part actions or part actions are performed because agents mutually believe that others will perform their parts.

Consider the ambulance example again. Are you committed to let the car behind you pass when you notice that it is an ambulance? What happens in this situation is that you notice some feature, e.g., car lacquer, which signals what you are supposed to do. It is not necessary that you and the particular other in the context of interaction—the driver of the ambulance—suddenly form beliefs about each others' intentions, beliefs, or commitments to part actions. Indeed, the ambulance might be on autopilot, hijacked, or controlled remotely by satellite—you will still know what action procedure is expected and part actions will be coordinated according to expectations, provided of course that each agent individually intends to act in accordance with expectations.

The crucial point of pivot in both ambulance-examples is this: *The only relevant difference between the scenarios with a civilian and an ambulance is that in the latter you attend to some feature of context that signals expected action procedure.* Appropriate coordination of part actions and commitments to action procedures in neither case necessitates reference

to others' mental states in content of intentions or beliefs of either agent. The proposition of situatedness embraces what maximalist analyses of joint action and explanations of commitments eschew—that is, features of context of interaction that signal to situated agents what roles and functions of persons and objects apply will influence the interaction. Before elaborating further the situated perspective, let's discuss 'minimalist' analyses of joint action.

### 3. MINIMALISM

What distinguishes maximalists and minimalists is that minimalists reject the notion that common knowledge or mutual belief is necessary for sets of part actions to qualify as joint action. Joint actions focused by minimalists are of 'simple kind'. Simple kind joint actions are, e.g., carrying a two-handed object together a shorter distance, early in development joint action, and emotionally guided joint action.

From the perspective of situatedness minimalists react to maximalism for reasons that miss something central about joint action—they do not consider how context influences joint action. Next, I provide a summary of minimalism.

For simple kind joint actions, Sebanz et. al. (2006, p. 70) suggest that shared goal representations and capacity to predict others' part actions' effects are sufficient conditions for sets of part actions to qualify as joint action. These conditions can be met if agents attend to each other, each others' actions, and the ambient. Vesper et. al. (2010, pp. 999-1001) further specify building blocks for joint action. These building blocks are: first, that agents realise that own task alone is insufficient for the whole action; second, capacity to monitor and predict own and complementary tasks' approximation to goal; and third, coordination smoothers such as exaggerated movements the goals of which are easy to predict. Findings in neuroscience show that agents, in turn-taking studies where other's actions are perceptually available, exhibit increased action response prohibition during observation of other's turn (Tsai et. al. 2005), suggesting that action observation triggers shared goal representations (cf. Knoblich and Jordan 2002, 2003).

Michael (2011) elaborates coordination smoothers to include expression (verbally or not) of emotion, which indicate what action one is prepared to perform. Anger, blushing, and sighing, for instance, indicate tractability of action procedures. Brownell (2011) draws upon findings in developmental psychology suggesting that children engage in joint action and understand commitments in interaction supposedly prior to development of cognitive abilities demanded by maximalist analyses (Tomasello et. al. 2005; Rakoczy 2006; Tomasello and Carpenter 2007; Tomasello and Rakoczy 2007; Rakoczy, Warneken, and Tomasello 2008; Carpenter 2009; Gräfenhain et. al. 2009).

Brownell argues that early joint action does not meet maximalist conditions. She reasons that infants are able to act jointly due to adults' scaffolding and engaging actions to which the infant attends and has an interest in. Pacherie (2011) suggests that it is much easier to act as a 'we' than Gilbert claims. According to Pacherie it is sufficient that an agent 'frames' him or herself as a 'we' together with others and team-reasons in Bacharach's (2006, p. 121) sense that "somebody 'team-reasons' if she *works out the best possible feasible combination of actions for all the members of her team, then does her part in it.*" Whether team reasoning is induced depends on circumstantial features that stimulate group identification, not on inferring whether others team-reason (Pacherie 2011, pp. 186, 189).

Kutz (2000, p. 11) emphasises that it is a sufficient condition for sets of part actions to qualify as joint action that agents have 'participatory intentions.' A participatory intention is an individual's fostering of a collective end by means of own action and "requires neither positive beliefs about others' intentions nor dispositions of responsiveness" (p. 20). Searle can be classified minimalist. This may raise some eyebrows since Searle demands that agents have 'collective intentions' to engage in joint action. But Searle (1990, p. 406; 1995, p. 24; 2010, p. 46; cf. 2002) denies that any amount of mutual beliefs or common knowledge in performance of part actions add up to joint action. I will have more to say about Searle's account later.

An analysis of joint action is 'minimalist' in the present sense if it states that it is not necessary for part actions to qualify as joint that there is common knowledge or mutual belief about intentions, beliefs, or reasons for action. Preceding paragraphs summarize minimalism.

Positive minimalist accounts of joint action differ. We have seen that some claim that action observation, which trigger shared goal representations, together with joint attention suffices for simple joint actions. Brinck and Gärdenfors (2003) claim that joint attention suffices for sets of actions to qualify as joint action if the goal does not have to be planned for. Joint attention is achieved when agents mutually attend to each others' states of attention, make attention contact, and alternate gaze between each other and a shared object of attention (Brinck 2001, pp. 268-70, 2004, p. 196). Searle invokes the 'thesis of the Background,' that there "is a set of nonrepresentational mental capacities that enable all representing to take place" (1983, p. 143), and claims that a "Background sense of the other as a candidate in cooperative agency" (1990, p. 415) plus collective intentionality suffices for joint action.

Although maximalism and minimalism are very different with respect to how agents' mental states must be related in performance of part actions for those actions to qualify as joint action I would like to focus on a common feature between them. Common to minimalists and maximalists is failure to ask in what way features of

context of interaction coordinate or at least influence coordination of part actions of agents situated in context. From a situated perspective we will see that, even for kinds of joint action focused by minimalists, lower levels of attention than joint attention suffices for joint action.

The review of maximalism and minimalism in this and the last section serves to introduce problems with current analyses of joint action. The problems stem from not taking contexts' influence on joint action seriously.

These are no minor problems. I have used an example with an ambulance, but this is just the tip of an iceberg of situations problematic for maximalism and minimalism. It will become clear in the next two sections that counterexamples to earlier analyses seem when we take a situated perspective on joint action. Think of any context of interaction and ask yourself whether it contains objects that signal to agents situated in that context what actions they are expected to perform and what actions are norm. Think of wedding rings, police badges, or dress codes in different contexts—at church, on a date, or at a crime scene. Now ask yourself, *What happens with interaction if in any of the contexts you imagined you add or remove such an object?* The answer is that coordination of part actions is influenced when such objects are present and attended to in this sense: agents involved need not know or have beliefs the content of which refer to particular others' mental states in the context of interaction.

Having reviewed earlier analyses of joint action and explanations of commitments' involvement, the entry point of the situated perspective in the debate about when sets of part actions qualify as joint action is clear. The situated perspective departs from an 'outside-in' point of view, focusing how *contextual factors* can replace individuals' internal representations of each others' mental states in explanations of joint action. From the situated perspective the 'inside-out' point of view, focusing *mental state relations* as enabling conditions for joint action appears flawed and incomplete. To further spell this out I turn next to analyse how contexts of interaction can be structured around roles, rules, and social functions that, if embodied in objects in context, signal appropriate actions procedures in social interaction.

#### 4. CONTEXTS OF INTERACTION

Searle's (1995, 2010) social ontology is handy to account for how contexts can be structured to influence social interaction and coordinate part actions into joint action. Other social ontologies may serve to illuminate situatedness, but Searle's is well known. Which ontology we choose is ultimately a matter of taste, as I will show later. Bicchieri's (2006) analysis of norms in conjunction with Searle's social ontology can explain commitments' involvement in joint action from a situated perspective.

Social interaction is always performed in context—‘context of interaction’ for short. Most contexts of interaction are structured so that roles, rules, and social functions apply to persons and objects context. How is such structuring of contexts of interaction to be understood? First out, consider Searle’s notions of *imposition of status function*.

Status functions are functions of objects or individuals accruing not by virtue of physical constitution but by virtue of status function declared to apply. Status function declarations’ propositional content represents a state of affairs that does not yet exist, e.g., “owners of such-and-such pieces of plastic count as citizens”, such that if others accept the declaration it is brought into existence (2010, pp. 85, 93-5). Status function declarations have the double direction of fit. If the piece of plastic endows its owner with the status function “counts as citizen” by virtue of the declaration (word-to-world direction), and if the owner acquires, through others’ acceptance, the status function it is represented as having, i.e., “citizen” (world-to-word direction) then the declaration is successful and the status function created.

Secondly, since status functions are not continuously imposed from context to context we want to know how they *persist*. Status functions can persist by being assigned by *standing* status function declarations. Standing status function declarations are declarations with an added proviso, e.g., “unless otherwise declared” or “from hereon” (Searle 1995, p. 97). Contracts and laws are paradigm standing status function declarations. For status functions to persist, whether declared as standing or not, it is necessary that they are *continually collectively recognised*. Collective recognition is an attitude of agents toward the propositional content of the original declaration. The form of collective recognition is, e.g., “We recognise that owners of such plastic cards count as citizens” (cf. p. 103). Continuation of collective recognition ensures persistence of status functions, why reiteration of imposition is not necessary for, e.g., maintained citizenship.

Thirdly, and importantly for explaining commitments in joint action, we need to understand the relationship between status functions and rights, duties, obligations, etc., in contexts in which they apply. Status functions entail deontology. Deontology is the set of entitlements, obligations, prohibitions, etc., accruing to objects or persons by virtue of their status functions. Deontology opens up a range of actions of people and uses of objects by virtue of the imposition of function. For instance, you are not only entitled to vote if you count as citizen, you are also obliged to pay taxes. Objects or people with a status function must (not) or may act or be used in certain ways. The reason why objects or persons must (not) or may act or be used in certain ways is that the status functions that accrue to them are collectively recognized, and thus the



range of actions allowed, prohibited, obligatory, etc., put others in position to expect certain action procedures in context of interaction (Searle 1995, p. 23).

Fourth, and importantly for understanding how status functions can be attended to, status functions are often indicated. There are indicators of status functions, and thus indicators of what roles, rules, and functions apply in context—‘indicators of deontology’ for short. Indicators are usually perceivable objects. Identity cards, uniforms, badges, and signatures are sample indicators (Searle 1995, p. 119f). Although one cannot see on an indicator of deontology that a person is allowed or prohibited from acting in some way, it signals such deontology by being collectively recognised to so signal—if there were no collective recognition there would be no deontology to signal to begin with. Importantly here, there are objects, collectively recognised as indicators of status functions, signalling in context of interaction what roles, rules, and functions apply. By implication, there are objects indicating what range of actions is open as allowed, prohibited, obliged, and so on, by agents with certain status functions in context of interaction. (There is, of course, only *one* function of indication, but it indicates both the presence of status function and the range of actions the status function opens up).

Together imposition and persistence of status functions, the deontology they entail, and indicators of them explain what is meant by ‘structure of context of interaction’. With analysis of context of interaction at hand we can now provide a situated perspective on commitments’ involvement in joint action.

Commitment in joint action will here mean that one has obligations to carry out part actions and that others have reason to expect that one carries them out—that is ‘commitment’ in Gilbert’s sense—or that one is responsive to help others perform their part actions if necessary for the joint action to succeed, in Bratman’s (1992) sense. Commitments to joint action, then, involve expectations that others will carry out their actions on pain of sanctions, or that one will be helped if one has problems carrying out one’s own part, or both.

There is a definition of norms that is reminiscent of these notions of commitment. Social norms, defined as some rule’s application in context, preference for conformity, belief that the rule is collectively recognised, and belief that conformity is expected and that deviance may evoke negative reciprocation (Bicchieri 2006, p. 11) concur with deontology in context of interaction as defined above. That is, status functions entail deontology—permissions, obligations, prohibitions, etc., that persist by continuation of collective recognition. Since deontology in contexts of interaction is by necessity collectively recognised, expectations about action procedure will be shared in each collective with the same deontology. People sharing deontology who

interact in a context where deontology is present and indicated will be able to coordinate part actions normatively appropriately by attending to features of context indicating roles and functions relevant to their interaction. Bicchieri (2006, p. 73) puts this nicely:

People are able to coordinate actions and expectations despite limited access to the operation and content of their and others' minds ... Such coordination is possible because people share collective perspectives which have led them to develop similar inferences and interpretations of common situations, object, and events.

Crucial to differentiate the situated explanation of commitments in joint action from maximalist explanations, it is according to the former not necessary that agents' mental states are related in ways stated as necessary by maximalists for commitments to be involved in joint action. Commitments are involved because agents have expectations about action procedure. These expectations' contents need not refer to others' mental states. How does this work? To answer this, the next section explicates what I mean by attention to indicators of status functions and shared expectations about action procedure.

## 5. ATTENTION IN ACTION

If agents attend to indicators of status functions in context of interaction in which they are situated joint action will be influenced because the indicators signal what part actions are expected and the norm. What is meant by 'attention to indicators of status functions'? Well, what is meant by 'attention'?

Let attention be modality neutral. Objects and events assigned social functions, roles, etc., in contexts of interaction, if attended to, signal appropriate action procedures to situated agents. For instance, when you enter a friend's house you search for a coat hanger, when in the supermarket people in uniform can give information, when you are out driving the sound of sirens alerts you to take appropriate action. Importantly, when you attend to features of context action possibilities become salient. If you attend to features of which you have prior experience about what collectively expected actions they signal, then you will recognise action possibilities in present context by categorisation of present input from attention (Brinck 1997, 1999, 2001, 2004; Brinck and Gärdenfors 1999; Brinck, Zlatev, and Andrén 2006; Bicchieri 2006).

Status function, we have seen, have indicators—e.g., wedding rings, badges, brooches, car lacquer, the chair man's club, uniforms, etc. Status functions, furthermore, are by necessity collectively recognised and have concomitant

collectively recognised deontology. *What happens, then, if we attend to indicators of status functions?* The action procedures signalled will be such that are collectively recognised and expected. Indicators of status functions trigger expectations about and commitment to collectively recognised action procedures when attended to.

We can now say this: indicators of status functions in context of interaction, if attended to by situated agents, trigger expectation about collectively recognised and expected action procedures. But, this is still not an account of how contexts of interaction influence and facilitate coordination of *joint* action. To facilitate joint action the expectations indicators trigger must be of a special kind: they must be shared expectations. What is meant by ‘shared’ expectations?

Expectations are shared if their contents are the same for two or more agents. For instance, expectations with the content “*A* will stop by the side of the road” are shared if two or more agents expect that *A* will stop by the side of the road. But, merely sharing expectations is not sufficient for joint action to be guided. People can share expectations that it will rain at the other side of the globe tomorrow without this facilitating joint action. Let’s therefore add, what is core of the situated approach, that the content of shared expectations must refer to an action procedure that is collectively recognised as expected in the context of interaction in which the agents are situated. However, *that action procedure A is collectively recognised as expected* does not have to figure in the content of shared expectations. It suffices that *action procedure A* is triggered by attention to an indicator of deontology and that agents situated in the context act accordingly. From these elaborations of ‘attention to indicators of deontology’ and ‘shared expectations’ we reach the backbone of the situated approach to joint action.

Agents attending to indicators of status functions, which entail deontology, in contexts in which they are situated, will share expectations about action procedure, because deontology *is* collectively recognised obligations, prohibitions, permissions, etc., about action procedure. Agents will be committed to certain actions in context of interaction, because they share expectations about allowed or not allowed action procedures. Importantly, it is not necessary for expectations about action procedures to be shared that their contents refer to other agents’ or the collective’s expectations or mental states. Status functions do not coordinate agents’ beliefs or knowledge about each others’ mental states. Status functions in context of interaction, through indicators of deontology to which people attend in action, coordinate part actions by means of which joint actions are performed. However, part actions performed will not qualify as joint by mere coincidence. Part actions will be performed as parts of collectively expected action procedures in the context of interaction, given of course

that agents intend to perform what their attention to features of context indicate as appropriate (if they do not, they breach commitments). It is therefore not necessary that agents interacting have beliefs the content of which refer to any particular other's intentions, beliefs, or commitments to part actions in the context of interaction for part actions to qualify as joint action. So we can see that contextual factors can replace individuals' internal representations of each others' mental states in explanations of joint action.

This section and the preceding establish the proposition of situatedness: *agents acting together are necessarily situated in social contexts structured around rules, roles, and functions, which are signalled by objects distributed in context of interaction*. We are now in a position also to understand why, and justify the claim that, the class of joint actions is wider than as demarcated by maximalists and minimalists.

To abate any doubts about this, let's return to the counterexamples that presented problems for maximalist analyses. The present account dissolves the problems highlighted in the counterexamples in a manner obscured also in the minimalist 'inside-out' perspective. We will see that the situated approach with its stress on context of interaction generates a flexible approach to analysing joint action suitable to complement earlier analyses.

First, then, consider the case with the ambulance, where in one scenario there is no indicator of status functions while in the latter there is. The driver behind you starts flashing his headlights. You wonder what you are supposed to do—what he or she intends, what he or she believes you have not noticed, etc. One way to explain aggravation of appropriate performance of part actions here is focusing disconnectedness of mental state-relations. Specifically, the focus would be on lack of reference to other's mental states in the content of beliefs or intentions from which respective actions are performed. This is the maximalist-minimalist explanation.

Now suppose you notice that the car behind you is an ambulance. So you veer to let it pass. *The only difference is that you suddenly attend to something that signal appropriate part actions*. In the second situation part actions are coordinated not because you know or have beliefs the content of which refer to the other's mental states but because features of context signal what part actions are expected. Of course your mental states *may* be related in the way necessary according to maximalists, but it is *not* necessary, and of course your attentional states *may* be connected in the minimalist sense. But, noticing that circumstances for interaction turn on contextual factors—and I dare say that failure to notice as much robs us of fruitful perspective on joint action—motivates shifting attention from shared mental content to shared contexts of interaction. In the situated perspective it suffices that you attend to indicators that signal and trigger

expectations about appropriate action procedure—that is, expected and recognised as allowed, prohibited, obligatory, etc.

To repeat, it is no mere coincidence what part actions are performed. Agents' mental states in a sense *are* related on the present account. But they are not related in the maximalist sense of reciprocal referencing. Mental states—expectations about action procedure—need stand in correlation to a deontology. They are shared in virtue of being so correlated.

The situated account of joint action thus explains how part actions are coordinated in joint action without maximalist necessary conditions for mental state relations being met. But is situatedness different from minimalism? It is.

Minimalist analyses of joint action, we have seen, state that, for joint actions of simple or early in development kind, or for joint action guided by expressions of emotions, maximalist conditions for joint action are not necessary. From a situated perspective, in contrast, also for non-simple joint action attention to indicators of status functions is sufficient for part action coordination into joint action. For simple kind joint action we saw that some minimalists claim that action observation, shared goal representations, and joint attention is sufficient for part actions to qualify as joint action (Vesper et. al. 2010; Sebanz et. al. 2006). From a situated perspective, in contrast, even for simple kinds of joint action attention to indicators of status functions is sufficient for sets of actions to qualify as joint action. In this respect the situated account requires only lower levels of attention (Brinck, Zlatev, and Andrén 2006) for part actions to be coordinated into joint action. And in this respect the situated account concerns kinds of joint action focused by both minimalists and maximalists. Brinck and Gärdenfors do say that whether joint attention is sufficient for part actions to be appropriately coordinated is altogether a question of context (1999 p. 94, 2003 p. 489; Brinck 1997 p. 130, 2001 p. 263). I agree with that statement. However, situatedness accounts for how objects in context signal appropriate part actions, something Brinck and Gärdenfors do not account for.

Maximalism faced a second problem. The problem was to explain commitments' involvement in joint action without detour to believed sharing of mental content.

Are you committed to leave space once you notice the car behind you is an ambulance? Yes, because there is a collectively recognised deontology, e.g., ambulances transport the acutely sick and must be allowed priority in traffic. The deontology was indicated, e.g., by the car lacquer or sounding of sirens. Attention to these indicators triggered expectations about allowed, prohibited, and obligatory action procedure. The two of you need not have any beliefs about each others' beliefs, intentions, or commitments to part actions. It is sufficient that indicators trigger

expectations about action procedure. Commitments are involved because features of context signal appropriate action procedures. For this to be the case it is not necessary that participants internally represent the contents of each others' mental states.

In conclusion, first, features of context to which agents attend in action can replace reciprocal mental state referencing in part action performance for part actions to qualify as joint action. Second, part actions so coordinated are not incidental but qualify as joint because they are performed in line with a collectively recognised deontology. Third, commitments can be involved in joint action without meeting maximalist conditions. Fourth, an analysis of the structure of contexts of interaction and attention in action by agents situated in contexts allow explanation of part action coordination and part actions' adding up to joint action.

I hope to have shown why we need to take context and the proposition of situatedness seriously in analysing joint action, what problems it solves to do so, and how we can do it. It is important to remember that the situated perspective is not meant to *replace* either maximalism or minimalism. It is meant to be *complementary*. Indeed, situatedness *cannot*, as here formulated, provide an independent analysis of joint action or explanation of commitments' involvement in joint action. Why this is so is explained in the next section, where several objections to situatedness are considered.

## 6. DEFENDING SITUATEDNESS

I will consider seven objections threatening situatedness. The first concerns whether it accounts for joint action at all, the second that the account is circular. The third to fifth objection are against the analysis of contexts of interaction, and the sixth against the reading of earlier analyses of joint action. The last objection is that the proposition of situatedness is trivial.

(1) First objection is that part actions that are not properly joint will qualify as joint action on the situated account. For instance, simultaneous, spatiotemporally proximal, or mere incidental part actions appear to qualify. Are the conditions stated as sufficient for part actions to qualify as joint by situationalists too admissive? The answer is: no. From attention to indicators of status functions in context of interaction specific individual intentional actions are performed which correspond to the range of actions open as allowed, prohibited, obligatory by deontology that applies in context. Actions are coordinated by context but also by recognition of expectations in context of interaction by agents situated in context. So, sets of part actions counted as joint actions according to the situated approach are no mere simultaneous, spatio-

proximal, or incidental actions. Situated agents act as agents related in a special way by context of interaction and expectations about action procedures without the contents of those expectations necessarily referring to each others' mental states. The conditions stated as sufficient for sets of part actions to qualify as joint according to situationalists are thus not too admissible. The account distinguishes mere synchronous, spatiotemporally proximal, similar, and chance coordinated actions from part actions coordinated into joint action.

(2) Second objection is that for context of interaction to coordinate part actions into joint action in the situationalist sense contexts must be appropriately structured around status functions, but status function creation and persistence requires continual collective recognition of the status functions. On pain of circularity, at some point it cannot have been a sufficient condition for part actions specifically intended to *jointly impose* status functions that agents attended to indicators of status functions that coordinated part actions and triggered shared expectation about action procedure. Can the situationalist avoid this objection? In the previous section I pointed out that situationalism is no *replacement* but rather a *complement* of earlier analyses. What conditions we state as necessary or sufficient for sets of part actions to qualify as joint action depends on the kind of action under consideration. The situationalist has to admit that there are some kinds of joints action that situationalism cannot explain. There are at least two such kinds. First, at some point in time conditions stated as sufficient on the situational account for part actions to qualify as joint action were not sufficient for joint *creation* of status functions. However, it is still true that contexts of interaction suitably structured and attended to by situated agents can coordinate part action into joint action of kinds focused by both minimalists and maximalists (section 5). Furthermore, for status functions to *persist*, once created, it is not necessary that agents recognise that others recognise that they recognise, and so on, that there is collective recognition of status functions. Secondly, situationalists cannot account for instances of joint action early in development when children supposedly do not recognise that, or which, deontology is indicated by certain objects. But, the conclusion that both maximalism and minimalism need completion from situationalism, or some similar account, still follows.

(3) Another objection might be that Searle's social ontology has problems on its own (Johansson 2003; Meijers 2003; Zaibert 2003; Smith 2003) and cannot support situationalism. As an objection to situationalism this is beside the point. Ultimately, an alternative social ontology will have to account for the existence and persistence of facts that influence social interaction, such as roles and functions of agents and objects situated in contexts of interaction. An alternative social ontology will have to explain

also the emergence of rules and norms of interaction and how agents situated in contexts of interaction are able to identify which rules, roles, functions, and norms apply. As far as these social phenomena are not explained *away* by an alternative social ontology, compatibility with the general situationalist credo is preserved. It just so happens, as a contingent empirical fact at the very least, that people have different roles, which entail ranges of expected actions in different contexts of interaction. Searle's social ontology is at the moment an influential genealogy of the structure of our social world.

(4) The last answer leads us to a fourth objection. Some might say that contexts of interaction structured in the Serlean sense is not what coordinate part actions, even if we admit that features of contexts can facilitate coordination of part actions into joint action without involvement of believed sharing of mental states. We can explain, the objection might go, contextual facilitation of joint action by appeal to other social phenomena, e.g., conventions. Situationalism is compatible with the view that conventions facilitate joint action. Even a social ontology based *wholly* on conventions motivates a situationalist perspective on joint action according to which recognition of presence of convention in context of interaction coordinate part actions into joint action. Conventions, though, rely on common knowledge (Lewis 1969, p. 78), which would make this brand of situationalism maximalist. But conventions as well as status functions are indicated (p. 61) and salience and precedents can trigger sharing of expectations and facilitate coordination of part actions (p. 57). Therefore conventionally structured contexts of interaction can facilitate joint action as well as contexts of interaction structured around status functions.

Objections (3) and (4) point to a central virtue of situationalism. Situationalism is theory neutral. That is, whatever analysis or genealogy we adopt to explain the structure of social reality, the situationalist outside-in perspective on social interaction will have a say in analysing joint action, as complementation to the inside-out perspective of maximalist-minimalist views. More about this under objection (7) about triviality.

(5) Another objection to the adoption of Searle's social ontology is that status functions are not always indicated (De Soto 2003). Furthermore, sometimes contexts of interaction are so complex in structure, or agents' attentional access so limited, that joint action is complicated rather than facilitated. Some of the contexts in which we interact are hierarchically opaque, have immense circumference, or diffuse borders. Some status functions are barely indicated. But this point rather reinforces than erodes support for one of the consequences the situationalist proposition, the consequence that when we state conditions for part actions to qualify as joint action



we have to take contextual influence seriously. That contexts of interaction aggravate or facilitate joint action adds potency to the proposition that contexts of interaction influence coordination of part actions.

(6) There may be objections to my reading of earlier analyses (sections 2 and 3). For instance, Tuomela (2007, p. 191f) says that, because of presence of institutions, actions tend to become routine, and Searle (1995, 2010) might be thought to have implicitly noticed what has been argued in this paper. If it were true that Tuomela and Searle are already aware of the present argument that would be no objection. It would show that there is prior support for it. But it appears that neither Tuomela nor Searle have fully appreciated the consequences of the present account.

Tuomela maintains that action within institutions—that is, complexes of status functions—depends on agents' acting as group members (2007, p. 198f). Acting as a group member requires that there is a social group, which is the case if and only if some individuals have accepted an ethos (goals, beliefs, standards, etc.) as constitutive for them as a collective, mutually believe that they are committed to the ethos, and mutually believe that they share beliefs that they are group members (p. 22). To act as a group member requires that it is mutually believed that there is an understanding that the ethos provides authoritative reasons for actions and that every member is committed to the ethos (p. 19f).

Since Tuomela requires that people's mental states in institutionalised joint action still are appropriately related, he does not realise that features of context of interaction can coordinate part actions in a sense sufficient for joint action. On one occasion (2003, p. 156) Tuomela says, in parenthesis, that agents must act as group members "at least in the creation" of institutions. Now that statement would be in line with the above concession (objection (2)) that although joint *creation* of status functions necessitates stronger relations between mental states than sufficient for joint action on the situationalist account, joint action in contexts structured around *existing* status functions does not. However, Tuomela does not consider, what has been argued at length here, that features of contexts of interaction attended to by situated agents can replace mutual referencing of mental state contents in explaining part action coordination into joint action. Furthermore, situationalism is not restricted to joint actions within complex institutions. Think of any context of interaction *without* indicators of status functions. People might have to agree or have mutual beliefs about part actions and commitments to engage in joint action in such contexts. Now *add* to the context indicators that signal expected action procedure. What happens? *Part actions of agents situated in context become coordinated in correlation to deontology signalled by status function indicators distributed in context.* This is not appreciated in current analyses of joint action, minimalist or maximalist.

Regarding Searle's theories of collective action (1990) and social ontology (1995, 2003, 2006, 2010), he does not seem to have appreciated how the latter can explain the former. Searle states, on the one hand, that collective action depends on individuals' we-intentions to perform a collective action by-means-of or by-way-of individual action. On the other hand, status functions are created by status function declarations that are collectively accepted or recognised. Situationalism can be understood as an argument that these two parts of Searle's legacy fit together in a way that he himself perhaps has not realised. The present argument consolidates Searle's theory of social ontology and collective action by explaining how contexts, which are structured around status functions, influence joint action. The notion of attention that the situationalist uses is hardly an addition at all.

Situationalism not only consolidates but also seems to develop parts of Searle's philosophical contribution since *Intentionality* (1983). Searle has been criticised for not explaining how agents engage in joint action without their mental states being related in the maximalist sense. He has been criticised for individualising collectivity by saying that a brain in a vat can we-intend a joint action. He has been criticised for appealing too soon to his thesis of the Background to explain how agents' mental states are related in joint action. Searle's appeal to a Background or embedded sense of the other as a candidate for cooperation (1990, p. 415; cf. 1983, p. 154) is his way, I take it, of saying that it is not mutual beliefs or common knowledge that make part actions joint but that part actions are performed from a mental state with certain psychological mode—a 'we-intentional' state. More follows from the thesis of the Background if coupled with the later social ontology. We invest our world with functions, Searle says. Those functions, he also says, persist because we continually collectively recognise them as existing, and they open up for ranges of actions. These actions are prescribed and proscribed and are collectively recognised as prescribed or proscribed. Objects signalling such functions, as is part of Searle's social ontology, facilitate, the situationalist continues, coordination of part actions into expected and normatively appropriate joint actions. Such signalling objects if attended to therefore function as coordinators of part actions. Status functions define roles and functions and entail prescription and proscriptions, which are signalled by indicators. Indicators are collectively recognised to so signal and thus have a coordination function. So it is not only an embedded Background sense of the other that allows people to perform joint actions without mutual beliefs or common knowledge. What is more, in a slogan, we distribute the 'we' in our Searlean heads into contexts of interaction in which we are situated when we act together. By doing so we can act together by gathering from

the objects around us what we expect rather than from particular others' mental states.

(7) Last objection before concluding, *Is the situationalist account of joint action trivial?* Everyone agrees that joint action is influenced by contextual factors but just find it too obvious to mention, right? First answer, no doubt contextual influence on joint action has been thought about before. Situationalism can be seen as clarification and specification of intuitions about contextual influences on social interaction and joint action. The account expresses such intuitions in a way that allows evaluation of them as theoretical complements to earlier analyses. It does so in a way that motivates re-evaluation of earlier analyses, and provides arguments for the intuitions. Second answer to the triviality-objection: situationalists do not rest content with the trivial credo that context is important. Situationalists aim at specific explanation of how, when, and why contexts influence social interaction and joint action. One consequence of situationalism is that we can adjudicate whether people were and predict if they will be able to act jointly. We can do so by examination of their situatedness. Were or will status functions be present? Were or will they be indicated? Were or will agents be able to attend to the indicators? Were or will the agents be members of the same or similar collectives with the same or similar deontology indicated by features of context? When we ask those questions we arrive at a fairly accurate answer to whether people were or will be able to engage in joint action in particular situations. This is not trivial. Situationalism provides credible predictions and explanations complementing earlier analyses. Taking a situated perspective on joint action is thus to appreciate that the structure of contexts of interaction *enable* participants' understanding of how to coordinate actions into normatively appropriate joint action. Third answer: it is baffling if maximalists or minimalists accept the proposition of situatedness but find it trivial and uninformative. Since context in the sense proposed render conditions stated by earlier analyses obsolete in a wide range of ordinary, everyday contexts of interaction, how can proponents of those earlier analyses accept such contextual influence and reduce it to triviality? Of course if, from a pre-theoretical stance, one were presented with maximalism, minimalism, and situationalism, one might find the latter trivial *if interpreted as stating merely that "contexts influence action"*. In that case it should be kept in mind that situationalism does not rest content with the sweeping claim "context matters", it articulates an approach with predictive and explanatory power that can be scrutinised, evaluated, argued for, and compared to other approaches beyond mere intuition. Furthermore, understanding how to coordinate is on this account situated in the stronger sense that contexts of interaction in which agents are situated enables normatively appropriate

coordination. Were we pre-theoretically to find analyses of joint action focusing mental content more appealing, then how should we explain the influence of external, material factors on joint action? The proposed situated perspective answers these questions.

## 7. CONCLUSION

The argument of this paper is simple: First, if contexts of interaction structured around status functions are common and influence joint action, then analyses of joint action must take contextual influence on joint action seriously; contexts of interaction structured around status functions are common and influence joint action; therefore, analyses of joint action must take contextual influence seriously. Second, if an analysis of joint action does not take context seriously, then that analysis is at best incomplete. Third, contemporary analyses of joint action do not take context seriously. Therefore, these analyses of joint action are at best incomplete and in need of completion. Situationalism, suitably developed, provides that completion.

We can conclude that taking contextual influence on joint action seriously allows flexible account of joint action and commitments in joint action. Agents are situated in contexts invested with structure that signals appropriate coordination of and commitment to part actions. This is perhaps new, but part and parcel of Searle's legacy. People walk, sport, and cook together, as friends, colleagues, and fellow citizens. They do so at home, at work, in rush hour traffic, at church, etc., sometimes with authority or in power relations. Whether the actions they perform are informed or motivated by believed sharing of beliefs, intentions, and commitments is one important factor in explaining their joint projects. Another important factor is the influence that the social environs in which they interact have on their expectations and identification of normatively appropriate action procedures.

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## BIBLIOGRAPHY

- Bacharach, Michael. *Beyond individual choice: teams and frames in game theory*. Princeton: Princeton University Press, 2006.
- Bicchieri, Christina. *The Grammar of Society: The Nature and Dynamics of Social Norms*. New York: Cambridge University Press, 2006.
- Bratman, Michael. 'Shared Cooperative Activity', *The Philosophical Review* vol. 101, no. 2 (1992), 327-341.
- Bratman, Michael. 'Shared Intention', *Ethics* vol. 104 (1993), 97-113.
- Bratman, Michael. *Faces of Intention: Selected Essays on Intention and Agency*. Cambridge: Cambridge University Press, 1999.
- Bratman, Michael. 'Modest sociality and the distinctiveness of intention', *Philosophical Studies* vol. 144 (2009), pp. 149-165.
- Brinck, Ingar. *The Indexical 'I': The First Person in Thought and Language*. Dordrecht: Kluwer Academic Publishers, 1997.
- Brinck, Ingar. 'Attention and tool use in the evolution of language' in *Spinning Ideas: Electronic Essays Dedicated to Peter Gärdenfors on his Fiftieth Birthday* (1999), <http://www.lucs.lu.se/spinning/>.
- Brinck, Ingar. 'Attention and the evolution of communication', *Pragmatics & Cognition* vol. 9, no. 2, (2001), 259-277.
- Brinck, Ingar. 'Joint Attention, Triangulation and Radical Interpretation: A Problem and its Solution', *Dialectica* vol. 58, no. 2 (2004), 179-206.
- Brinck, Ingar. 'Intersubjectivity and Intentional Communication', in Zlatev, J., Racine, T., Sinha, C. and E. Itkonen (eds.), *The Shared Mind: Perspectives on Intersubjectivity* (2008), 115-140. Amsterdam: John Benjamins Publishing Co.
- Brinck Ingar. and Gärdenfors, Peter. 'Representation and Self-Awareness in Intentional Agents', *Synthese* vol. 118 (1999), 89-104.
- Brinck, Ingar. and Gärdenfors, Peter. 'Co-operation and Communication in Apes and Humans'. *Mind & Language* vol. 18, no. 5 (2003), 481-501.
- Brinck Ingar., Zlatev, Jordan and Andrén, Mats. 'An applied analysis of attentional intersubjectivity', *SEDSU Deliverable 7*, 2006.
- Brownell, Celia. 'Early Developments in Joint Action', *Review of Philosophy and Psychology* vol. 2 (2011), 193-211.
- Carpenter, Malinda. 'Just how Joint is Joint Action in Infancy?' *Topics in Cognitive Science* vol. 1 (2009), 380-392.

- De Soto, Hernando. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York: Basic Books, 2003.
- Gilbert, Margaret. *On Social Facts*. Princeton: Princeton University Press, 1989.
- Gilbert, Margaret. 'Walking Together: A Paradigmatic Social Phenomenon', *Midwest Studies in Philosophy* vol. XV (1990), 1-15.
- Gilbert, Margaret. 'Collective Preferences, Obligations, and Rational Choice', *Economics and Philosophy* vol. 17 (2001), 109-119.
- Gilbert, Margaret. *Sociality and Responsibility: new essays in plural subject theory*. Lanham, Maryland: Rowman & Littlefield Publishers, 2000.
- Gilbert, Margaret. 'The Structure of the Social Atom: Joint Commitment as the Foundation of Human Social Behavior', in Schmitt, F. F. (ed.), *Socializing Metaphysics: The Nature of Social Reality* (2003), 39-64. Lanham, Maryland: Rowman and Littlefield Publishers, Inc.
- Gilbert, Margaret. 'Rationality in Collective Action', *Philosophy of the Social Sciences* vol. 36, no. 1 (2006), 3-17.
- Gilbert, Margaret. 'Searle and Collective Intentions', in Tsohatzidis, S. L. (ed.), *Intentional Acts and Institutional Facts: Essays on John Searle's Social Ontology* (2007), 31-48. Dordrecht: Springer.
- Gilbert, Margaret. 'Mutual Recognition, Common Knowledge, and Joint Attention', in T. Rønnow-Rasmussen, B. Petersson, J. Josefsson, and Egonsson, D. (eds.), *Homage á Wlodek: Philosophical Papers Dedicated to Wlodek Rabinowicz* (2007), [www.fil.lu.se/hommageawlodek](http://www.fil.lu.se/hommageawlodek).
- Gilbert, Margaret. 'Shared intention and personal intentions', *Philosophical Studies* vol. 144 (2009), 167-187.
- Gräfenhain, Maria, Behne, Tanya, Carpenter, Malinda and Tomasello, Michael. 'Young Children's Understanding of Joint Commitments', *Developmental Psychology* vol. 45, no. 5 (2009), 1430-1443.
- Hakli, Raul, Miller, Kaarlo and Tuomela, Raimo. 'Two Kinds of We-Reasoning', *Economics and Philosophy* vol. 26 (2010), 291-320.
- Johansson, Ingvar. 'Searle's Monadological Construction of Social Reality', *American Journal of Economics and Sociology* vol. 62, no. 1 (2003), 233-255.
- Knoblich, Günther. and Jordan, Jerome. 'The mirror system and joint action', *Advances in Cognitive Research* vol. 42 (2002), 115-134.
- Knoblich, Günther and Jordan, Jerome. 'Action coordination in groups and individuals: learning anticipatory control', *Journal of Experimental Psychology* vol. 29, no. 5 (2003), 1006-1016.

- Kutz, Christopher. 'Acting Together', *Philosophy and Phenomenological Research* vol. LXI, no. 1 (2000), 1-31.
- Lewis, David. *Convention*. Oxford: Blackwell Publishers, 1969.
- List, Christian and Pettit, Philip. *Group Agency: the possibility, design, and status of corporate agents*. New York: Oxford University Press, 2011.
- Meijers, Anthonie, W. 'Can Collective Intentionality be Individualized?' *American Journal of Economics and Sociology* vol. 62, no. 1 (2003), 167-183.
- Michael, John. 'Shared Emotions and Joint Action', *Review of Philosophy and Psychology* vol. 2 (2011), 355-373.
- Miller, Suemas. 'Joint Action: The Individual Strikes Back', in Tsohatzidis, S. L. (ed.), *Intentional Acts and Institutional Facts: Essays on John Searle's Social Ontology*, (2007), 73-92. Dodrecht: Springer.
- Pacherie, Elisabeth. 'Framing Joint Action', *Review of Philosophy and Psychology* vol. 2 (2011), 173-192.
- Pettit, Philip and Schweikard, David. 'Joint Actions and Group Agents', *Philosophy of the Social Sciences* vol. 36, no. 1 (2006), 18-39.
- Rakoczy, Hannes. 'Pretend play and the development of collective intentionality', *Cognitive Systems Research* vol. 7 (2006), 113-127.
- Rakoczy, Hannes and Tomasello, Michael. 'The Ontogeny of Social Ontology: Steps to Shared Intentionality and Status Functions', in Tsohatzidis, S. L. (ed.), *Intentional Acts and Institutional Facts: Essays on John Searle's Social Ontology* (2007), 113-138. Dodrecht: Springer.
- Rakoczy, Hannes, Warneken, Felix and Tomasello, Michael. 'The sources of normativity: Young children's awareness of the normative structure of games', *Developmental Psychology* vol. 44, no. 3 (2008), 875-881.
- Searle, John. *Intentionality: An Essay in the Philosophy of Mind*. Cambridge: Cambridge University Press, 1983.
- Searle, John. 'Collective intentions and actions', in P. R. Cohen, J. Morgan and M. E. Pollack (eds.), *Intentions in Communication* (1990), 401-416 Cambridge: MIT Press.
- Searle, John. *The Construction of Social Reality*. New York: The Free Press, 1995.
- Searle, John. *Consciousness and Language*. Cambridge: Cambridge University Press, 2002.
- Searle, John. 'Social Ontology and Political Power', in F. F. Schmitt (ed.), *Socializing Metaphysics: The Nature of Social Reality* (2003), 195-210. Maryland: Rowman and Littlefield Publishers, Inc.
- Searle, John. 'Social ontology: Some basic principles', *Anthropological Theory* vol. 6, no. 1 (2006), 12-29.

- Searle, John. *Making the Social World: The Structure of Human Civilization*. New York: Oxford University Press, 2010.
- Smith, Barry and Searle, John. 'The Construction of Social Reality: An Exchange', *American Journal of Economics and Sociology* vol. 62, no. 1 (2003), 285-309.
- Sebanz, Natalie, Bekkering, Harold and Knoblich, Günther. 'Joint action: bodies and minds moving together', *TRENDS in Cognitive Science* vol. 10, no. 2 (2006), 70-76.
- Tomasello, Michael and Carpenter, Malinda. 'Shared intentionality', *Developmental Science* vol. 10, no. 1 (2007), 121-125.
- Tomasello, Michael, Carpenter, Malinda, Call, Josep, Behne, Tanya and Moll, Henrike. 'Understanding and sharing intentions: The origins of cultural cognition', *Behavioral and Brain Sciences* vol. 28 (2005), 675-735.
- Tsai, Chia-Cin, Kuo, Wen-Jui, Hung Daisy L. and Tzeng, Ovid J-L. 'An electrophysiology study of representing others' actions', *Journal of Cognitive Neuroscience Supplement*: 70 (2005).
- Tuomela, Raimo. 'What is Cooperation?' *Erkenntnis* vol. 38 (1993), 87-101.
- Tuomela, Raimo. 'Collective Acceptance, Social Institutions, and Social Reality', *American Journal of Economics and Sociology* vol. 62, no. 1 (2003), 123-165.
- Tuomela, Raimo. 'The We-Mode and the I-Mode', in F. F. Schmitt (ed.), *Socializing Metaphysics: The Nature of Social Reality* (2003), 93-128. Maryland: Rowman and Littlefield Publishers, Inc.
- Tuomela, Raimo. 'We-Intentions Revisited', *Philosophical Studies* vol. 125 (2005), 327-369.
- Tuomela, Raimo. 'Joint Intention, We-Mode and I-mode', *Midwest Studies in Philosophy* vol. XXX (2006), 35-58.
- Tuomela, Raimo. *The Philosophy of Sociality: The Shared Point of View*. New York: Oxford University Press, 2007.
- Tuomela, Raimo and Miller, Kaarlo. 'We-Intentions', *Philosophical Studies* vol. 53 (1988), 367-389.
- Vesper, Cordula, Butterfill, Stephen, Knoblich, Günther and Sebanz, Natalie. 'A minimal architecture for joint action', *Neural Networks* vol. 23 (2010), 998-1003.
- Woodward, Amanda, L. 'Infants' ability to distinguish between purposeful behaviors', *Infant Behavior & Development* vol. 22, no. 2 (1999), 145-160.
- Zaibert, Leo A. 'Collective Intentions and Collective Intentionality', *American Journal of Economics and Sociology* vol. 62, no. 1 (2003), 209-232.