

Lecture 04 : Philosophical Issues in Behavioural Science

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Monday, 21st October 2024

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1. Introduction

This week we first encounter joint action and the second (of two) main question for the whole course: What distinguishes doing something jointly with another person from acting in parallel with them but merely side by side? We will investigate the leading, best developed attempt to answer this question (Bratman 2014). We will also consider some initial objections to that answer.

We turn to the question, What distinguishes doing something jointly with another person from acting in parallel with them but merely side by side?

This lecture does not depend on you having studied any previous sections.

In case you missed some of the earlier lectures, this lecture has been written to avoid depending on you having already studied those lectures. After this lecture, you should be able to write a basic essay for one of the questions set for your short essay.

For the minimum course of study, consider only these sections:

- *The Question* (section §2)
- *Bratman on Shared Intentional Action* (section §5)

2. The Question

Getting a pre-theoretical handle on joint action is best done by contrasting joint actions with actions that are merely individual but occur in parallel.

In considering joint action from a philosophical point of view we face a counterpart to the The Problem of Action:

What distinguishes doing something jointly with another person from acting in parallel with them but merely side by side?
(I'll call this *The Problem of Joint Action*)

Here is a recent, more careful (if overly jargoned) formulation of the Problem:

‘When we act together [...] we are not each simply acting in light of expectations of the actions of others while knowing that those actions of others depend on their expectations of our actions. [...] merely publicly walking alongside each other on a crowded sidewalk without colliding, while involving complex forms of mutual responsiveness, is not yet walking together in a shared intentional way. Can we articulate conditions that go beyond such strategic interaction and are sufficient for and illuminating of our acting together?’ (Bratman 2014, pp. 1–2)

2.1. Why?

Philosophers' ultimate aims are to 'discover the nature of social groups in general' (Gilbert 1990, p. 2) and to understand the conceptual, metaphysical and normative aspects of basic forms of sociality (Bratman 2014, p. 3). But one route to these lofty goals is to focus on solving The Problem of Joint Action—that is, on distinguishing genuinely joint from merely parallel activities in mundane cases involving two or three people.

2.2. Aim

After this section, you should understand what The Problem of Joint Action is. But is it really a problem?

3. Quick Answers Fail

Is The Problem of Joint Action really a problem? Not if there is a quick answer. In this section we consider three potential quick answers.

What distinguishes doing something jointly with another person from acting in parallel with them but merely side by side?

We consider three quick answers:

1. a joint action is an action with two or more agents
2. a joint action is an event with two or more agents¹
3. the Simple Theory of Joint Action

None of these answers appears to be correct (although, as always, none of the considerations offered are decisive).

Aims. In rejecting the quick answers we aim to better understand the Problem of Joint Action and why it is difficult to answer, thereby showing that it really is a problem.

3.1. Background: Paradigm Cases

What are some supposedly paradigm cases of joint action?

Cases offered as paradigms in philosophy include two people painting a house together (Bratman 1992), lifting a heavy sofa together (Velleman 1997), preparing a hollandaise sauce together (Searle 1990), going to Chicago together (Kutz 2000), and walking together (Gilbert 1990).

¹ This proposal is due to Ludwig (2007, p. 366) who proposes that 'A *joint action* is an event with two or more agents, as contrasted with an *individual action* which is an event with a single agent.'

In developmental psychology, supposedly paradigm cases of joint action include two people tidying up the toys together (Behne et al. 2005), cooperatively pulling handles in sequence to make a dog-puppet sing (Brownell et al. 2006), and bouncing a block on a large trampoline together (Tomasello & Carpenter 2007).

Other supposedly paradigm cases from research in cognitive psychology include two people lifting a two-handled basket (Knoblich & Sebanz 2008), putting a stick through a ring (Ramenzoni et al. 2011), and swinging their legs in phase (Schmidt & Richardson 2008, p. 284).

We should not assume that these are all paradigm cases.

Nor should we assume, without argument, that there is a single phenomenon of which all these are paradigm cases.

3.2. Are joint actions simply actions with two or more agents?

The short answer is no, because:

1. primitive actions (whether bodily movements or tryings) are ‘all the actions there are’ (Davidson 1971, p. 59); and
2. in many paradigm cases of joint action (see above) there are clearly no primitive actions with multiple agents.

In painting a house, walking together or lifting a two-handled basket we each move only our own bodies directly.

The notion of a joint action as an action with two or more agents is therefore too narrow relative to our aim of theorising about a range of cases taken to be paradigmatic joint actions. (This is not to say that no actions have two or more agents; see Blomberg 2011.)

Against this consideration, you may object that

3.3. Are joint actions simply events with two or more agents?

To illustrate, suppose two hunters each attack a deer. Neither attack was individually fatal but together they were deadly. In this case the hunters are agents of the killing of the deer, so the event counts as a joint action on Ludwig’s proposal.

To fully understand Ludwig’s proposal we need to understand what it is for an individual to be among the agents of an arbitrary event and not just an action. This can be done in terms of a notion of grounding which I adapt from a discussion of action by Pietroski (1998).

Pietroski identified a simple and elegant way of generalising from the idea that an individual can be the agent of an action to the idea that an individual can be the agent of a larger event. (His account does require a minor correction, but this is not relevant here.) This can be generalised to allow for any number of agents.

Let us stipulate that events $D1, \dots, Dn$ ground E , if: $D1, \dots, Dn$ and E occur; $D1, \dots, Dn$ are each (perhaps improper) parts of E ; and every event that is a proper part of E but does not overlap $D1, \dots, Dn$ is caused by some or all of $D1, \dots, Dn$.

Then let us say that for an individual to be *among the agents of an event* is for there to be actions $A1, \dots, An$ which ground this event, where the individual is an agent of some (one or more) of these actions.

To illustrate, consider the hunters again. Let THE EPISODE be an event comprising only the hunter's actions, the deer's death and the events causally linking these. Since, for each hunter, there is a set of events including this hunter's attacking which ground THE EPISODE, we can conclude that THE EPISODE is a joint action on Ludwig's proposed definition.

This definition is too broad. To see why, consider two ways of elaborating the story about the hunters. In one they are best friends who have set out together with the aim of killing this deer, and they are exhibiting many features associated with paradigm cases of joint action. In the other elaboration, the hunters are bitter rivals completely unaware of each other's presence. In fact, were either to have suspected the other was present, she would have abandoned the deer in order to target her rival. In both elaborations, Ludwig's proposal entails that THE EPISODE is a joint action. But whereas the 'best friends' elaboration resembles paradigm cases of joint action, the bitter rivals are merely acting in parallel.

3.4. Is the Simple Theory of Joint Action True?

Imagine two sisters who, getting off an aeroplane, tacitly agree to exact revenge on the unruly mob of drunken hens behind them by positioning themselves so as to block the aisle together. This is a joint action.

Meanwhile on another plane, two strangers happen to be so configured that they are collectively blocking the aisle. The first passenger correctly anticipates that the other passenger, who is a complete stranger, will not be moving from her current position for some time. This creates an opportunity for the first passenger: she intends that they, she and the stranger, block the aisle together. And, as it happens, the second passenger's thoughts mirror the first's. So the condition imposed by the Simple Theory of Joint Action is met: each passenger is acting on her intention that they, the two passen-

gers, block the aisle together and these intentions are appropriately related to their actions.

But the contrast between the cases of the strangers and the sisters exacting revenge suggests that the strangers passengers are not taking part in a joint action.

Apparently, then, the Simple Theory of Joint Action is false because the condition it implies is sufficient for joint action can be met even where there is no joint action at all.

3.5. Further Reading

There are interesting discussions which may motivate the view that we do not need a theory of shared intention to solve The Problem of Joint Action in Baier (1997), Chant (2007), Petersson (2007), and Longworth (2019, pp. 13ff).

4. Objections to the Simple Theory of Joint Action

To understand why philosophers invariably reject the Simple Theory of Joint Action in favour of bolder alternatives, consider objections to it. The objections aim to show that the Simple Theory cannot distinguish between all the contrast cases that an account of shared agency must distinguish.

In 2024–25 this section was included in the lecture in a compressed form. The notes below are still relevant but most people can skip directly to the section Blocking the Aisle at the end.

4.1. Aim

Our aim in this section is to find grounds for rejecting the Simple Theory of Joint Action.

4.2. Bratman's Counterexample

Michael Bratman offers a counterexample to something related to the Simple Theory of Joint Action. Suppose that you and I each intend that we, you and I, go to New York together. But your plan is to point a gun at me and bundle me into the trunk (or boot) of your car. Then you intend that we go to New York together, but in a way that doesn't depend on my intentions. As you see things, I'm going to New York with you whether I like it or not. This doesn't seem like the basis for shared agency. After all, your plan involves me being abducted.

But it is still a case in which we each intend that we go to New York together and we do. So, apparently, the conditions of the Simple Theory are met (or almost met) and yet there is no shared agency.

4.3. Reply to Bratman's Counterexample

The mafia case fails as a counterexample to the Simple Theory of Joint Action because if you go through with your plan, my actions won't be appropriately related to my intention.

And, on the other hand, if you don't go through with your plan, then it is at best unclear that your having had that plan matters for whether we have shared agency.

What seems to be wrong in the Mafia Case is not that the agent's need further intentions, but just that if their intentions don't connect to their actions in the right way then there won't be intentional joint action.

Bratman seems to be aiming to identify intentions whose fulfilment requires shared agency. But is this necessary? It seems to me that what matters is that the Simple Theory as a whole distinguishes shared agency from parallel but merely individual agency, not that it does so by way of fulfilment conditions of intentions.

4.4. Walking Together in the Tarantino Sense

Contrast friends walking together in the way friends ordinarily walk, which is a paradigm example of joint action, with two gangsters who walk together like this ... Gangster 1 pulls a gun on Gangster 2 and says: "let's walk" But Gangster 2 does the same thing to Gangster 1 simultaneously.

The interdependence of the guns means that their actions can be appropriately related to our intentions.

The conditions of the Simple Theory are met both in ordinary walking together and in walking together in the Tarantino sense. So according to the Simple Theory, both are intentional joint actions.

But walking together in the Tarantino sense is not an intentional joint action unless the central event of *Reservoir Dogs* (Tarantino 1992) is also a case of joint action.

Therefore the Simple Theory fails to distinguishing joint action from actions performed in parallel but merely individually.

4.5. Reply to Tarantino's Counterexample

At least two philosophers responded, independently of each other, by saying that walking together in the Tarantino sense really is a joint action.

My opponents reasoned that each is acting intentionally, and that coercion is no bar to shared agency.

Just here we come to a tricky issue. There is a danger that we will just end up trying to say something systematic about one or another set of intuitions, where nothing deep underpins these intuitions.

This is a real threat; you'll see that most philosophers are not careful about their starting point in theorising about shared agency. They merely give examples or a couple of contrast cases and off they go. Adopting this undisciplined approach risks achieving nothing more than organising your own intuitions. (It's fine to organise intuitions on weekends and evenings, but it shouldn't be your day job.)

Despite the danger of merely organising intuitions, let us consider a further attempted counterexample.²

4.6. Blocking the Aisle

Imagine two sisters who, getting off an aeroplane, tacitly agree to exact revenge on the unruly mob of drunken hens behind them by standing so as to block the aisle together. This is a joint action. Meanwhile on another flight, two strangers happen to be so configured that they are collectively blocking the aisle. The first passenger correctly anticipates that the other passenger, who is a complete stranger, will not be moving from her current position for some time. This creates an opportunity for the first passenger: she intends that they, she and the stranger, block the aisle. And, as it happens, the second passenger's thoughts mirror the first's.

The feature under consideration as distinctive of intentional joint action is present in both the Strangers and the Sisters: each passenger is acting on her intention that they, the two passengers, block the aisle.

But the Strangers, unlike the Sisters, do not perform an intentional joint action.

So the Simple Theory of Joint Action fails to provide a correct answer to the question, What distinguishes genuine joint actions from parallel but merely individual actions?

² There is another way of going, which does not depend on trading intuitions (Butterfill & Sinigaglia 2022). But it would take us too far ahead to get into that at this stage.

5. Bratman on Shared Intentional Action

The leading, best developed account of shared intention is due to Michael Bratman. What are the main features of his account?

5.1. What to Read

The full theory is given in Bratman (2014) and summarised in Bratman (2022).

5.2. The Theory

What distinguishes joint actions from parallel but merely individual actions?

Bratman's first step towards answering this question is to postulate shared intention:

'A first step is to say that what distinguishes you and me from you and the Stranger is that you and I share an intention to walk together—we (you and I) intend to walk together—but you and the Stranger do not. In modest sociality, joint activity is explained by such a shared intention; whereas no such explanation is available for the combined activity of you and the Stranger. This does not, however, get us very far; for we do not yet know what a shared intention is, and how it connects up with joint action.' (Bratman 2009, p. 152)

The view that joint action involves shared intention is almost universal.³ To illustrate:

'I take a collective action to involve a collective [shared] intention.' (Gilbert 2006, p. 5)

'The sine qua non of collaborative action is a joint goal [shared intention] and a joint commitment' (Tomasello 2008, p. 181)

'the key property of joint action lies in its internal component [...] in the participants' having a "collective" or "shared" intention.' (Alonso 2009, pp. 444–5)

'Shared intentionality is the foundation upon which joint action is built.' (Carpenter 2009a, p. 381)

Once we postulate shared intention, the key problem becomes to say what it is.

³ Pacherie (2013, pp. 3–7) discusses in depth the idea that a notion of shared intention is useful for understanding shared agency.

Bratman's theory has two components, a functional characterisation and a substantial 'construction of interconnected intentions and other related attitudes ... that would ... play the roles characteristic of shared intention' (Bratman 2014, p. 32).⁴

5.3. Bratman's Functional Characterisation

Shared intention serves to (i) coordinate activities, (ii) coordinate planning, and (iii) structure bargaining.

To illustrate, if we share an intention that we cook dinner, this shared intention will (iii) structure bargaining insofar as we may need to decide what to cook or how to cook it on the assumption that we are cooking it together; the shared intention will also require us to (ii) coordinate our planning by each bringing complementary ingredients and tools, and to (i) coordinate our activities by preparing the ingredients in the right order.

Bratman also proposes a requirement: shared intentions should be inferentially and normatively integrated with ordinary, individual intentions.

5.4. Bratman's Substantial Construction

Bratman claims that the following are collectively sufficient⁵ conditions for you and I to have a shared intention that we J:

- (1) '(a) I intend that we J and (b) you intend that we J
- (2) I intend that we J in accordance with and because of (1a), (1b), and meshing subplans of (1a) and (1b); you intend that we J in accordance with and because of (1a), (1b), and meshing subplans of (1a) and (1b)
- (3) '(1) and (2) are common knowledge between us.' (Bratman 1993, p. View 4)

Elaborating on the intention in condition (2), Bratman adds that each agent must intend 'that the route from these intentions to our joint activity satisfies the connection condition' (Bratman 2014, p. 52). But what is the connection condition? It is 'the condition that specifies the nature of [the] explanatory relation' between shared intention and joint action ... [T]he basic idea is that what is central to the connection condition is that each is responsive to the

⁴ Bratman's theory has been refined and defended over more than two decades (Bratman 1992, 1993, 1997, 2009, 2014). Here we consider just the core components.

⁵ In Bratman (1992), the following were offered as jointly sufficient *and individually necessary* conditions; the retreat to sufficient conditions occurs in Bratman (1997, pp. 143–4) where he notes that 'for all that I have said, shared intention might be multiply realizable.'

intentions and actions of the other in ways that track the intended end of the joint action—where all this is out in the open.’ (Bratman 2014, pp. 78–9).

5.5. Appendix: Further Conditions

In more recent work Bratman has added these further conditions to those above:

- (4) The persistence of each intention in conditions (1) and (2) is interdependent with the persistence of every other such intention (Bratman 1997, p. 153; Bratman 2006, pp. 7–8; Bratman 2009, p. 157; Bratman 2010, p. 12; Bratman 2014, p. 65).
- (5) We will J ‘if but only if 1a and 1b’ (Bratman 1997, p. 153; Bratman 2009, p. 157).

The common knowledge condition, (3) above, is extended to include these further conditions, (4) and (5).

On this course, I shall usually simplify exposition by discussing conditions (1)–(3) only.

There are some further developments of the view in Bratman’s most recent work (Bratman 2014).

5.6. Alternatives to Bratman’s Theory of Shared Intention

This course focusses on Bratman’s theory because it is the best developed, most influential and has yet to encounter a successful objection in print (despite many attempts).

You are not expected to study alternatives to Bratman’s theory on this course. But you may choose to do so.

Laurence (2011) and Roessler (2020) will appeal to Anscombe fans.

Opposing Bratman’s view that shared intention does not require any ontological, metaphysical or conceptual innovations, some hold that shared intentions involve a novel attitude (Searle 1990; Gallotti & Frith 2013). Others have explored the notion that the primary distinguishing feature of shared intentions is not the kind of attitude involved but rather the kind of subject, which is plural (Helm 2008). Or they may differ from ordinary intentions in involving distinctive obligations or commitments to others (Gilbert 1992; Roth 2004). Or the most fundamental distinguishing mark of shared intentions is the way they arise, namely through team reasoning (Gold & Sugden

2007; Pacherie 2013)—a view that we will return to later in the course when considering game theory.

Finally, Bratman's approach has inspired a family of accounts, including Asarnow (2020), Blomberg (2016), Ludwig (2007, 2016) and Tollefsen (2005).

6. Conclusion

The Problem of Joint Action really is a problem. Does Bratman's theory of shared intention solve it? (We don't know yet; but at least we know what Bratman's theory is.)

Given the difficulties we found in identifying a quick answer to the The Problem of Joint Action (in *Quick Answers Fail* (section §3)), it seems that we may need to postulate shared intention.

This is a problem. Everyone agrees that shared intentions stand to joint actions roughly as intentions stand to ordinary, individual actions.⁶ Most also agree that shared intentions are neither shared nor intentions. But apart from that, there is much disagreement about what shared intentions are.

Some hold that the states in question involve a novel attitude (Searle 1990; Gallotti & Frith 2013). Others have explored the notion that the primary distinguishing feature of these states is not the kind of attitude involved but rather the kind of subject, which is plural (Helm 2008). Or they may differ from ordinary intentions in involving distinctive obligations or commitments to others (Gilbert 1992; Roth 2004). Or perhaps the most fundamental distinguishing mark of these states is the way they arise, namely through team reasoning (Gold & Sugden 2007; Pacherie 2013). Opposing all such views, Bratman (1992, 2014) argues that the distinctive states, which he calls 'shared intentions', can be realised by multiple ordinary individual intentions and other attitudes whose contents interlock in a distinctive way. Bratman's approach has inspired a family of accounts along broadly these lines, including Asarnow (2020), Blomberg (2016), Ludwig (2007, 2016) and Tollefsen (2005).

How are we to determine when any two of these accounts should be regarded as competing attempts to characterise a single phenomenon and when they

⁶ As you may remember (from *The Problem of Action meets Habitual Processes* in Lecture 02), reflection on the dual-process theory of instrumental action suggests that most philosophers are wrong about how intentions stand to ordinary, individual actions. (Incidentally, there may even be an analogous consideration concerning joint action: what Sebanz et al. (2005) call 'task co-representation' is, essentially, a stimulus-action mapping where the mapped action involves your action and mine.)

should be regarded as compatible attempts to characterise different phenomena? And how are we to single out, from among all of these accounts, those which are correct? The growing number and increasing diversity of accounts make urgent these twin problems. It may be that they can be solved. But a quick glance at the history of philosophy suggests not.

Postulating shared intention should therefore be a last resort.⁷

But if you are forced to postulate shared intention, it is essential to be familiar with the leading, most carefully developed account of it: *Bratman on Shared Intentional Action* (section §5).

Is Bratman's account 'a model [...] that can support wide-ranging research in philosophy and the social sciences' (Bratman 2022, p. 8)? If not, is there a better alternative?

Glossary

connection condition 'the condition that specifies the nature of [the] explanatory relation' between shared intention and joint action ... [T]he basic idea is that what is central to the connection condition is that each is responsive to the intentions and actions of the other in ways that track the intended end of the joint action—where all this is out in the open' (Bratman 2014, pp. 78–9). 11

contrast case a pair of cases where one involves shared agency and the other does not and which are otherwise as similar as possible. 7

dual-process theory of instrumental action Instrumental action 'is controlled by two dissociable processes: a goal-directed and an habitual process' (Dickinson 2016, p. 177). (See instrumental action.) 13

instrumental action An action is *instrumental* if it happens in order to bring about an outcome, as when you press a lever in order to obtain food. (In this case, obtaining food is the outcome, lever pressing is the action, and the action is instrumental because it occurs in order to bring it about that you obtain food.) You may encounter variations on this definition of *instrumental* in the literature. For instance, Dickinson (2016, p. 177) characterises instrumental actions differently: in place of the teleological 'in order to bring about an outcome', he stipulates that an instrumental action is one that is 'controlled by the contingency

⁷ Again, the joint seems parallel to the individual in this respect: there are grounds for the view that postulating intention should be a last resort too.

between' the action and an outcome. And de Wit & Dickinson (2009, p. 464) stipulate that 'instrumental actions are *learned*'. 14

joint action Many of the things we do are, or could be, done with others. Mundane examples favoured by philosophers include painting a house together (Bratman 1992), lifting a heavy sofa together (Velleman 1997), preparing a hollandaise sauce together (Searle 1990), going to Chicago together (Kutz 2000), and walking together (Gilbert 1990). These examples are supposed to be paradigm cases of a class of phenomena we shall call 'joint actions'.

Researchers have used a variety of labels including 'joint action' (Brooks 1981; Sebanz et al. 2006; Knoblich et al. 2011; Tollefsen 2005; Pettit & Schweikard 2006; Carpenter 2009b; Pacherie 2010; Brownell 2011; Sacheli et al. 2018; Meyer et al. 2013), 'social action' (Tuomela & Miller 1985), 'collective action' (Searle 1990; Gilbert 2010), 'joint activity' (Baier 1997), 'acting together' (Tuomela 2000), 'shared intentional activity' (Bratman 1997), 'plural action' (Schmid 2008), 'joint agency' (Pacherie 2013), 'small scale shared agency' (Bratman 2014), 'intentional joint action' (Blomberg 2016), 'collective intentional behavior' (Ludwig 2016), and 'collective activity' (Longworth 2019).

We leave open whether these are all labels for a single phenomenon or whether different researchers are targeting different things. As we use 'joint action', the term applies to everything any of these labels applies to. 3, 4, 10, 13

meshing subplans 'The sub-plans of the participants *mesh* when it is possible that all of these sub-plans taken together be successfully executed.' (Bratman 2014, p. 53) 11

modest sociality 'small scale shared intentional agency in the absence of asymmetric authority relations' (Bratman 2009, p. 150). 10

primitive action Primitive actions are 'ones we do not by doing something else' (Davidson 1971, p. 59). (This notion has been clarified and refined by Hornsby (1980) and others, but the refinements are unlikely to matter for our purposes.) 5

problem a question that is difficult to answer. 4, 13

shared intention An attitude that stands to joint action as ordinary, individual intention stands to ordinary, individual action. It is hard to find consensus on what shared intention is, but most agree that it is neither

shared nor intention. (Variously called ‘collective’, ‘we-’ and ‘joint’ intention.) 10, 11, 13

Simple Theory of Joint Action Two or more agents perform an intentional joint action exactly when there is an act-type, ϕ , such that each agent intends that they, these agents, ϕ together and their intentions are appropriately related to their actions. (A refined version of this view is introduced and considered in Butterfill (2016) where it is called the ‘Flat Intention View’; it is a very minor view whose purpose is motivate considering other views.) 4, 6–9

The Problem of Action What distinguishes your actions from things that merely happen to you? (According to Frankfurt (1978, p. 157), ‘The problem of action is to explicate the contrast between what an agent does and what merely happens to him.’) 3

The Problem of Joint Action What distinguishes doing something jointly with another person from acting in parallel with them but merely side by side? 3, 4, 7, 13

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