

Action and Consciousness

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Précis

This thesis is about the role of consciousness in describing and explaining actions. Examples of such descriptions and explanations surface in utterances as diverse as “This was *fun*, let’s do it again”, “Sorry for the mess, I wasn’t paying enough *attention*”, “I have *thought* about this a long time before I made the first step towards therapy”, “He did it because he *felt obliged*, but not because he *wanted* it”, “The first service was so fast, that the tennis player reacted before she *consciously recognised* the ball”, “In the first experiment, I had the *impression* that I did it myself, but in the second, I could *observe* my hand moving as if it was *controlled* by someone else”.¹ I follow the defenders of a *causal theory* of action in arguing that actions, like all other changes in the course of the world, demand causal explanations.

Action theory, as I understand it, is part of the philosophy of mind. In action theory—as in the philosophy of mind in general—two projects are often merged, a conceptual and an empirical project. In our case, the main question of the *conceptual project* is: What are the most basic concepts we use in describing and explaining action, and how are they related to one another? The main question of the *empirical project* is: What goes on in our minds and brains, before and while we perform actions?

A particular issue for the *conceptual project* is the question whether the concept of action can be analysed in more basic concepts, as for example “voluntary behaviour” or “intentional doings”. A particular issue for the *empirical project* is the question whether our minds or brains harbour two different “executive systems”, one for automatised and one for deliberate action. Another question is whether the experience that we have acted—our “sense of action” or “phenomenal quality of action”—is phenomenally basic, or whether it is constituted by other more basic experiences.

It is natural to consider the distinction into a conceptual and an empirical project a prime example of division of labour in the factory of science. Philosophy should be concerned with the conceptual project, while the natural sciences like psychology—broadly understood as to cover cognitive science and all other mind sciences—and neuroscience deal with figuring out the empirical details of actual performances of action.

However, in practice the dividing line often blurs, sometimes not to the best for either one of the projects. In their proverbial armchairs, philosophers often speculate about the mental and neuronal processes that constitute the performance of action without consulting empirical findings. Some scientists, on the other side, tend to think that their experiments warrant radical reformulations of the conception of ourselves as rational agents. They are ready to give up freedom of choice or metaphysical realism for all of

¹ If used in examples, the pronouns “she” and “he” are meant to stand generically for women, men, and all other persons.

humankind on the basis of experiments conducted with two dozen subjects from an advanced graduate seminar.

In this thesis, I try to keep the conceptual and the empirical project apart as long as possible, in order to *reconcile* them in the end. I try to show that empirical findings in psychological and neuroscientific action theory do not contradict, but in fact often support our commonsensical action theory. Even more, the basic concepts of our commonsensical action theory are necessary to understand the findings in the first place, as well as to develop empirical models in scientific action theory. In order to appreciate this point, however, one has to make our everyday practice of describing and explaining actions explicit.

Conceptual analysis is the method of explication. Analysing the mental discourse requires the concept of cause on its bottom, as Donald Davidson showed in his essay “Actions, Reasons, and Causes”. The main idea was refined in subsequent essays by Davidson, as well as Robert Audi, Michael Bratman, Alvin Goldman, Harry Frankfurt, Jennifer Hornsby, Al Mele, John Searle, David Velleman, and others. Most of this work’s emphasis, however, lay on the relation between reasons and causes as well as the relation between action and mental states and events such as desires, decisions, intentions, deliberations, and the will. Those states and events show the characteristic of *intentionality*. They represent entities beyond themselves such as objects, events, states of affairs, or possible worlds.

While only creatures with intentional states can be rational agents and have thoughts in the narrow sense, I argue that *consciousness* in the sense of a *metaphysically subjective field of experience* is the more fundamental mental phenomenon. Thus, any action theory that tries to explain the actions of thinking and feeling beings is not complete unless it says something about consciousness.

Contemporary research in the psychology and neurosciences of action is about consciousness in action, yet the term “consciousness” is used in as many different readings as it is in common parlance. Disentangling the conceptual relations between everyday terms often converges with disambiguating different senses of the term “consciousness” in the sciences, or with revealing the implicit assumptions underlying scientific theories.

Conceptual analysis is thus a philosophical practice that applies to both, everyday and scientific action explanations. I argue that our explanatory practice in everyday life is systematic and successful. There is no categorical difference between *non-mental* causal claims that involve the collapses of bridges or the fungal decay of the largest beech tree on Elm Street and *mental* causal claims that involve seeing a guinea pig hobbling by or voting in a democratic election.

As an exercise of *descriptive metaphysics*, any explication of those causal claims should give the *truth conditions* for the uncontroversial cases that we take to be literally true or false. At first sight, the explanatory practices of everyday life and the sciences seem to fall apart. *Singular causal claims* in everyday life like “The storm caused the bridge to collapse” or “Seeing him angry, caused her to rethink her marriage” are best analysed by using

counterfactuals. *General causal claims* in neuroscience and psychology, on the other hand, like “Applying lidocaine to the skin causes the feeling of numbness” or “Repeating motoric patterns causes a stable representation in procedural memory” are best analysed as *dispositional statements* about physical objects, namely brains, sometimes indirectly in virtue of the mental structures that *supervene* on them.

Contrary to first impression, both kinds of explanations share a common ground. Causation is a relation between events. Events are changes that objects undergo. Dispositions are the causal properties of those objects. Explaining disposition in a non-mysterious way refers to the microstructures of the respective objects. Causal and dispositional claims are thus mutually dependent. In order to attribute a causal property to an object, we need to know which causal relations it enters. And in order to make a causal claim, we need to know the objects that undergo those changes that we consider cause and effect.

Causation and dispositions can enter action theory from two angles, namely from the viewpoint of an analysis of mental concepts and from the viewpoint of an empirical performance model. From the viewpoint of the *analysis of mental concepts*, in particular action concepts, the concept of a causal property plays an important role. We explain actions with reference to what we want and intend. Changes in those states must be causally related to changes in movements and thoughts that constitute our actions, otherwise it would remain mysterious that we can *fulfil* our wants and intentions.

From the viewpoint of an *empirical performance model* in scientific action theory, the main aim is first to reveal how the structure of the mind, and thus the brain, allows for automatic and flexible behaviour, and second, how thought or “higher cognition” changes or interferes with automatic motor patterns. Again, “flexibility” and “automatisms” are terms in a causal model. “Influencing” and “interfering” are terms for causing changes in otherwise undisturbed states or regularities.

This thesis is arranged according to the conceptual and the empirical viewpoint. In *Part I: Foundations*, I lay out a framework that relates the metaphysics of events, causation, and dispositions to the practice of explanation in the philosophy of mind. This part consists of two chapters. In *Chapter 1. Method*, I argue that *concepts* are mental tokens, namely stable categories in our long-term memory that systematically and productively enter thoughts. While animals have many of those categories, only human beings have *purely lexical concepts*, namely concepts that can only be acquired through language. *Conceptual analysis* is bringing the conceptual *deep structure* of our everyday explanations to the fore by dissociating concepts from *context* and by disentangling *conceptual confusion*. This analysis resembles the *rational reconstruction* of scientific discourse of the psychology and the neuroscience of action. Reconstruction has a *constructive* aspect in explicating presuppositions and a *destructive* aspect in dissolving conceptual confusions and argumentative fallacies.

In *Chapter 2. Metaphysics*, I sketch a *three-dimensionalist metaphysics* that takes physical objects as occupying space-time regions, and events as changes of those objects. It is not *revisionary*, but *descriptive* in taking the causal idiom in our discourse at face value. One part of it, our pre-theoretic mental discourse, can be called *folk psychology*. It has an

internal and an external reading. *Internal folk psychology* is our ability to interpret or understand others, be it based on simulation or on hypotheses about their mental life, or both. I am mainly concerned with *external folk psychology*, namely an idealised external description of our *successful, robust, and frequent* explanations. They are taken to be literally true, a stance called *mental realism*.

The central ontological category of a causal theory of action is that of an *event*. I argue that events are spatio-temporally extended particular changes of physical objects. Physical objects are in *states*, since they have a structure that is relatively constant over time. Mental states show the same constancy and thus qualify as the entities that are subject to mental changes. Events can be set apart from objects, states, and processes along four dimensions. As all other categories, they have a *type-reading* or a *token-reading*. Like objects but opposed to masses, they are *countable*. Events are not *homogenous*, because like objects but contrary to states they differ from their parts and from their accumulations. Although countable, events are not *mathematical points*, since they are extended. They are picked out relative to what is constant and regular. *Processes* can be seen as chains of events.

Causation is a relation between events. The causal relation is neither *symmetric* nor *reflexive*, and presumably not even *transitive*. *Causal explanations* can be singular or general. If they are *singular*, they contain a, possibly implicit, indexical element that denotes a particular event and fixes the circumstances relative to which the event is picked out. *General* causal claims are about *types* of particular instances of events. *Causal relations* obtain independent from our descriptions, but what we consider cause and effect depends on our *individuation* of events. Causal relata cannot be *abstract* like facts, universals, or states of affairs, since only reference to *concrete* entities can explain what has happened at a certain place and time. Apart from events, no other concrete entity, as for instance a person, an object, or a state, can be a causal relatum, since without reference to datable changes of those concrete entities, we cannot say or explain what is going on.

Causation is different from *causal explanation*. While an event can have many explanations, it can only have one cause, though many effects. Causal explanation may refer to *necessary* or *sufficient conditions*, but it is misleading to describe causation itself in *modal terms*. One can distinguish six *theories of causation*. I follow defenders of a *counterfactual theory* in holding that two events are related as cause and effect, if, given the first had not occurred, the second would not have occurred. The longer the temporal gap between two events, the thinner is the basis for our counterfactual intuitions. The rival causal theories do not support our mundane causal intuitions. The *nomological theory* can only be true if the *covering law model* of explanation is true. Yet, most laws of nature are about abstract universals, or, if given a concrete and temporal reading, they are not true or explanatory. The *probabilistic theory* of causation cannot account for singular causal claims, the *transfer theory* is partly too broad and partly too narrow, and the *interventionist theory* too metaphorical.

Laws state what is regular in the world. I follow those who argue that they best apply to nature's capacities, namely the *dispositional structures* of the objects, changes of which are causes and effects. Causal explanations refer to both, to what happened and to the structure of the entities participating in what happened. Dispositions are *causal properties*.

They supervene on a structural basis that is itself dispositional, once one reaches its fundamental parts. All natural kinds are defined by their *essences*. Their essences are their causal powers. The most basic physical forces and elementary particles are defined by their lack of categorical properties. I refute arguments against dispositions, namely objections from *multiple realisations*, *lack of explanatory power*, *modality*, and *epiphenomenalism*. Dispositional properties explain how the world can be *regular* without being *deterministic*, as some versions of the covering law model would have it. Minds are a complex of dispositions. Intentional and conscious states as well as character traits are *mental dispositions* that are presupposed or mentioned in causal explanations of action and other behaviour.

The mind *supervenies* on the brain. Supervenience is *modal* claim about *asymmetric covariance*. There can be no mental change, property, or state without a physical change, property, or state. The mind can supervene *weakly* or *strongly* on the brain, *metaphysically* or *naturally*, and *globally* or *locally*. I argue that we have good grounds to assume strong metaphysical supervenience that holds locally and globally. Creatures like us have consciousness in any world they inhabit, independent of other relations in such a world. Given the evidence, *epiphenomenalism* and *phenomenal zombies* are not only empirically, but presumably also metaphysically impossible. Given all we know, no world can differ from ours merely in lacking consciousness. The evidence for this *distinction intuition* trumps the evidence for the epiphenomenal *supervenience intuition*. Arguments in favour of the latter are based on dubious claims about *causal closure* or on employing only *superficial* instead of *strong conceivability*.

In *Part II: Mind*, I analyse the most important mental concepts that enter action explanations. This part has two chapters. In *Chapter 3. Consciousness*, I argue that consciousness is an overall state, namely a field constituted by a finite set of partial states. Events in consciousness are changes of those states. Every conscious field, and every state within this field, is *metaphysically subjective* in that it necessarily requires an experiencer who has consciousness. Some states within the field have a phenomenal *quality*, a way *it is like* to have those states. Some states have no, or at least minimal phenomenal quality, namely abstract thoughts. The atomic units of phenomenal experience can be called *qualia*. They are *expressible* and often *directly apprehensible*, though more or less focal. Phenomenal states are *encapsulated* in being irrevocable by thought. Empirical arguments support the idea that phenomenal states can be unconscious in being beyond the conscious field and thus beyond *cognitive access*, since they share enough functional properties with their conscious counterparts.

Another term for the centre of the field is *focus*, another term for the edges is *fringe*. Mental states can wander from fringe to focus and back without ceasing to be states of the same type. I argue that quality and focus are orthogonal to one another. Focus does not change the quality of particular states but only of the entire conscious field. Mental states can thus differ in *qualitative* and in *focal intensity*. In vision, *perceptual focus* differs from *attentional focus*. One can focus on perceptually blurry or amorphous figures in the corner of one's eye, while the *gaze* is fixed.

Access is defined in *functional* terms. A state in consciousness is accessible to a person, if it is disposed for free use in action, in particular mental actions like thought and reasoning.

In order to be accessible to the person, a conscious state needs a certain degree of proximity to the *focus*. “Attention” is mainly used as a functional term in psychology. *Active attention* is the *mental action* of drawing focus and other cognitive resources to objects and events, *passive attention* comes close to what I call *focus*. I refute claims arguing that attention is *independent* of consciousness as well as those arguing that it is *necessary* for consciousness.

A mental state’s being qualitative has two *functions*. First, it is a power that makes a *causal difference* in cognitive processing as well as action and other behaviour. Often primary phenomenal states are accompanied by phenomenal states of pleasure and displeasure, who play a similar role. The second function of phenomenal states is that they are *indicators* in allowing us to gain knowledge about ourselves. Many conscious states are *intentional states* in that they represent entities, or more broadly, possible worlds beyond them. Others are not intentional. A being can only have intentional states, if it has a conscious field with a subjective perspective. Mental states like beliefs, intentions, and some types of desires must be understood as *non-occurrent* types of mental dispositions. We consider them mental, for they can directly affect the conscious field.

I endorse *phenomenal realism* in holding that phenomenal consciousness is not explainable in intentional or functional terms. One can *double dissociate* phenomenal consciousness from intentional representations. Conscious states need not be *relational*, they come before higher-order representations in *ontogenesis* and *evolution*, and there is an *explanatory gap* about their existence. However, I reject *phenomenal essentialism*, namely the claim that the conscious field is exhausted by phenomenal states.

In *Chapter 4. Intentionality*, I discuss intentional states seminal to action, in particular desires and intentions. *Intentional states*, of which *propositional attitudes* form the largest class, have a concrete *intentional content* that can be expressed in an abstract *propositional content*. The content is constituted by mental tokens, arguably concepts, which need not be lexical. Intentional states represent possible worlds including the actual world. Beliefs and desires are the prototypical intentional states. Their fulfilment conditions are reversed. *Beliefs* are fulfilled if true, namely in accordance with the world. *Desires* are fulfilled if the world changes in accordance with them.

Intentional terms are ambiguous on four dimensions. They have a *token* and a *type* reading, most of them have a *phenomenal* and a *purely functional* reading, they have an *explicit* reading of being *acquired* at a certain time and a *potential* reading of being *generable* ad hoc, and they have a *propositional* reading and a *non-propositional* reading. Beliefs or thoughts do not *constitute* phenomenal experience, though they may *influence* it.

The concept of desire comprises all *positive attitudes towards possible worlds*. Only *motivations* are behaviour-related functional desires. Some desires are not related to behaviour, namely those about assumed *personal*, *empirical*, or *temporal impossibilities*. Desiring or wanting can be independent of pursuing *pleasure*. Pleasure is a *basic phenomenal state*, whose onset is caused by changes in other mental states. Desires for pleasure or avoiding displeasure often motivate for action, but so do *non-appetitive* moral or functional desires. *Motivation* is independent from emotions, but emotions often give

rise to *motivational desires*.

I argue that *intentions* are the pertinent motivational states. Intentions are *hybrid states* of beliefs and desires. They are *explicit dispositions*, but not phenomenally or otherwise in consciousness, though one can be *conscious of* one's intentions in the sense of having conscious thoughts about them. Since the content of an intention represents an action in the future of the actual world, it contains at least three *indexical concepts*, namely of a person, a time, and a place, though sometimes only implicitly. In harbouring intentions, we must meet the *causal power constraint* in intending what we consider possible, and the *consistency constraint* in not intending the performance of two inconsistent actions. Otherwise, we are *irrational*. If an agent has an intention, she wants to act at a certain point in space and time, she believes that it is *possible* for her, and she is *settled upon* the deed. Changes in either one of the constituents of intentions cause changes in the motoric centres that underlie our bodily actions, or changes in those centres that underlie thought directly.

Evidence from psychology supports the view that intentions involve lexical concepts. The ability to represent conditionals and temporal relations explains why human beings can have *plans*, namely complex intentions. Conditionals require a *recursive internal syntax*, and temporal concepts are *lexical concepts*. Arguably, both can only be acquired through language. This explains why we do not credit toddlers and animals with intentions, let alone plans. The hybrid approach can overcome the crucial problems of rivaling approaches that view intentions as *all-out evaluations* or *self-fulfilling expectations*, as having a *self-referential* or a *non-conceptual content*, as being *derived* from beliefs and desires, or as incorporating *feedback* or *motor representations*. The hybrid approach is also in accord with the basic assumptions of some systems of jurisprudence. Intentions are *primary reasons*, for they *rationalise* actions and *cause* their substrates. We come to have them in two ways. Either they arise when one of the parts arises, or we perform the mental action of *practical reasoning* that leads to a *decision*. A decision is the onset of a state of intending.

In *Part III: The Sketch of a Theory*, I outline an empirical action theory and consider the role of consciousness in the preparation and performance of action. This part comprises two chapters. In *Chapter 5. Action*, I argue that the two main topics of action theory are *explication* and *explanation*. The first is a *conceptual project* about our everyday explanatory practice, the second an *empirical project* about what is going on in our minds when we perform actions. Pre-theoretically, when performing an action, one takes oneself to have the *choice* to do one thing or another, one can *try* to act and be *successful* or *fail*, one usually *knows* about one's *abilities* to perform actions, and one has *reasons* and *motivations* for them.

One can distinguish two approaches to explication. As opposed to *action concept atomists*, adherents of *action concept molecularism* take the concept of action to be analysable in more basic terms. *Causalists* think it must be analysed with reference to causation. *Narrow causalists* believe that actions are caused by changes in intentional states. I argue for *broad causalism* in claiming that the substrates of actions have causes, but they need not be mental, as the case of routines reveals. The concept of action should not be analysed in terms of its mental causes, but rather in terms of its properties. Actions are

voluntary doings. As a *mode of performance*, voluntariness is the mark of actions. *Automatisms* may occur in us, but we experience them as passively happening to us as changes from the outside. *Actions with intentions* as well as *routines*, namely actions without intentions, have the *quality of action*. We experience them as performing them ourselves.

Only *potential actions* can be doings. Some doings like breathing are rarely routines, since we mostly breathe *involuntarily*. When we breathe voluntarily, it is an action. Automatisms like the heartbeat are never doings, since we can never *directly* voluntarily influence our heartbeat. They are *non-voluntary* movements like other passive bodily changes. An action is *physiologically primitive*, if we can do nothing further in order to perform it. There are no mental events of “tryings” that constitute primitive actions, the term “trying” rather liberates an action term from its dependency on success. *Mental actions* share all basic features with bodily actions, though they can occur without movements in limbs or muscles. Mental actions exist even though they are not *behaviouristically* observable. Assuming their existence does not presuppose *dualism*, nor is it susceptible to *circularity* in explanation, as long as one acknowledges that practical reasoning is an action itself. In psychology, a frequent *concealed mental action term* is “controlling” or “controlled”, which can mean “voluntary”, “causing”, or “performing the second-order mental action of drawing attention”. Sometimes mental actions lead to *mental modes* that can explain routines or habits.

Philosophical action theory focuses on the term “intentionally”. Many theorists miss the fact that it has three readings, namely “doing something voluntarily”, “doing something with a prior intention”, and “putting up with the consequences of an action”. The first reading does not create an *intensional context*. I argue that the term “intentionally” has neither a single meaning, nor a rich mongrel meaning. It expresses different though hierarchically related concepts.

In explaining action, *narrow causalism* holds the *Humean claim* that explanations with reasons can be analysed as explanations in terms of antecedent mental states, as well as the *causal claim* that actions are events caused by those states. Objections to this view stem from *mental overpopulation*, lack of *psychological reality*, confusing *occurrences* with *performances*, and confounding *causation* with *sufficiency*. *Broad causalism*, defended in this thesis, can meet these challenges. Actions are performed, not caused. When a person performs an action, there is a causal change along the pathway from intentions to the action’s *substrates* via motor centres, or sometimes from activation in those centres to the substrates directly. Experiments from psychological literature do not challenge but support this picture, since their results can be explained as interplay of intentions, routines, and mental modes.

In *Chapter 6. Consciousness in Action*, I look from an empirical point of view at quality, focus, and access in the preparation and performance of action. In the first part, I challenge arguments for believing in the existence of a *conscious will*. Since “will” has at least six readings in scientific literature, I focus on the main claim that we experience a *volitional impulse* just before starting an action. This impulse is sometimes taken to be a *proximal intention*. In philosophy, *volitionalism* construes the causes of action as types of volitions, as for instance *phenomenal tryings*, *non-physical willings*, *mental fluid activities* or

intentions in action. Volitionalists thereby often confuse *causation* with *sufficiency* or confound *states* with *events*. I argue that it is empirically inadequate to hold that actions with intentions, or routines that lack intentions, issue from a phenomenal twitch or jerk of will.

In psychology, *Libet-style experiments* test for the putative experienced causes of action. I argue that this research paradigm faces severe methodological and empirical objections. The experimental task does not *specify* which kind of will or intention it sets out to test, the wording of the request is *paradoxical*, the setting requires *more* than the action of finger movement, mental timing is neither *reliable* nor *exact* in the dimension of milliseconds, and the measured cortical potentials *vary* greatly among trials. Follow-up experiments overcome some difficulties, but the fundamental problems remain. The lack of *single trial analysis* forecloses *double dissociating* the neuronal causes and the movement effects. It thus forecloses *causal generalisations*. Besides, intentions are not even the *mental correlates* of neuronal readiness potentials. Most importantly, since there is no volitional impulse in the first place, subjects pinpoint all kinds of experiences in the questionnaires from thoughts, afferent feedback, to early phases of movement or muscle tension. The phenomenal will is the *construct* of a misconceived theory.

In the second and third part of the chapter, I discuss the role of quality and focus in the performance of action. Performing an action has a specific phenomenal quality, the *quality of action*, that differs from passively experiencing something happening to us. Typically, this quality is not high in *phenomenal intensity* or in the focus of the field of consciousness. With other *action quality realists*, I argue against *action quality deniers*, who hold that no such experience exists. I refute claims that one cannot *experience activities*, that *reportability* is the mark of voluntariness, and that the quality of action consists in the negative fact about a *lack of force*. Most action quality realists argue that the quality of action is *not phenomenally basic* but instead constituted by one or more necessary basic components. I challenge the component view.

Six possible components can be distinguished. I argue that the *experience of authorship* is either the same as the quality of action, or it is mistaken as a dubious experience of *agent causation*, based on cross-fading events and states. The *experience of mental causation* does not capture the quality of action, for it applies at best to pathological cases of *compulsion*. One can double dissociate the *experience of effort* from the quality of action, since one can feel effort without acting and act without feeling effort. Besides, effort comes in degrees, the quality of action does not. What is expressed by the *experience of freedom* is either better characterised as beliefs about freedom, which cannot colour our action experience, or it simply captures *negative freedom*, namely the lack of external forces. Yet, the negation is abstract and cannot be experienced itself. The *experience of control* is another candidate for a constituent of the quality of action, but either “controlled” denotes a *second-order action type*, or it denotes the same as the term “voluntary”. Finally, those who analyse the quality of action as the *experience of trying* confuse the semantics of action sentences with the physiology of action. Either the term “trying” is another term for “doing”, or, like “authorship”, it is another term for “voluntariness”, but then it is *redundant*. Pathological cases of movements of *anarchic hands* are not adequately described as performed without an agent or upon unconscious intentions, because they are not actions in the first place. I argue that the quality of action is *phenomenally basic*,

since it cannot be reduced to more basic experiences. This result is only disappointing for those, who implicitly or explicitly employ perceptual or representationalist theories of consciousness.

Researchers often merge the phenomenal constituents with the supervenience basis of the quality of action. One can distinguish three approaches to the latter, the phenomenal, the representational, and the hybrid group. The *phenomenal group* comprises *feedback accounts* and *feedforward accounts*, which are both subject to severe problems. As mental actions and some pathological cases suggest, the quality of action cannot be identical with *kinaesthetic* or *proprioceptive feedback*, and thus the respective *neuronal correlates* differ. *Pre-motor processing*, as assumed by feedforward accounts, cannot do the trick either, since mental actions involve no movements and the issuing of *effference copies* is arguably a *brief event* that does not coincide with the quality that *endures* through the entire performance of action.

The second group of approaches to the supervenience basis of the quality of action endorse *representationalism*, to which the two prevailing *feedback-feedforward accounts* subscribe. The *comparator model* purports to explain two properties of action, namely *monitoring* through feedback and the *emergence* of a quality of action. Yet, it unjustifiably *doubles* the supervenience basis by introducing a representationalist layer of non-conscious *comparisons*, it fails to explain *how* representations give rise to phenomenal qualities, it mistakenly infers from *impairments* in the quality of action to its *constitutive* parts, and it fails to account for *mental actions*. The *model of apparent causation* says that the quality of action arises upon an *inference* from thought to action. It thereby confounds *causal beliefs* or *judgements* with *experience*, and it merges *thought processes* with *states of intending*. It also fails to account for *routines* and gives a *phenomenally inadequate* picture of the quality of action.

The third group is the *hybrid group*. Most of its members claim that basic experiences combine with *higher cognitive states* in constituting the quality of action. I argue that *narratives*, *cultural beliefs*, *situational clues*, and the *long-term sense of ownership* are not constitutive for the quality of action and thus their supervenience basis does not coincide with the one of the experience in question.

In the last part of the chapter, I relate focus and access to language and freedom. The comparator model finds adequate application in the explanation of *focus in action*, since a mismatch of intention and effects of action activates focal attention. Focus is a necessary condition for *knowledge* about actions, since it makes *access* possible to intentions and action performances. Judgments or beliefs about our own actions can be subject to *cognitive dissonance*, just like any kind of representation is prone to error. Yet, that renders neither our entire mental life a *construction*, nor our experience of action an *illusion*. Failures do not lead to radical scepticism, since we are justified in taking most of our beliefs to be true.

Only *rational persons* can be full-fledged agents, but in order to be an agent one need not experience one's actions in a special way. Since agents without such an experience are conceivable, it is only an *empirical fact* that we human beings have it. Focus relates to freedom of action through intentions. Intentions have an *explicit content*, and thus

demand that the content was accessible through focus at some point of time. I argue that *libertarian ability accounts* need to assume a *standing causal pathway* between the substrates of intentions and the motor centres for bodily action. We are free to change the world through our actions. Explanations in everyday life and the sciences can be reconciled, since the second investigates systematically what the first already fragmentarily presents to us.

A common approach in philosophy, especially in the philosophy of mind, is to occupy an empty space in the logical geography of ideas and defend it against all rivalling ideas. Often, this enterprise is concerned with building an argument while staying neutral towards many of the basic concepts we know, rather than with relating them to one another.

This thesis follows a different path. I am rather concerned with large framework questions than with ornamental counterexamples. My argumentation develops from the general to the specific. Needless to say, the framework must be provisional in many respects, but staying neutral towards the basic concepts is not a choice we have. Too much of the explanatory machinery depends on its large toothed wheels.

I hope that some of my examples are not too gruesome for smooth reading. In writing about action and causation, I followed the tradition of illustrating abstract ideas by colourful cases of poisoning, shooting, breaking, and destroying. I hope this stance will be understood as loyalty to an old custom rather than a glorification of violence.