The Social Cognition of Intentional Action*

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Abstract

Malingering is defined as an intentional social act of simulating or exaggerating illness. However, determinations of intentionality are often met with suspicion, and among experts in malingering nobody quite likes to make intentionality judgements. A serious medical, legal, and political management of malingering, however, must confront the problem of intentionality. Both malingerers (in planning their deception) and examiners (in trying to detect it) rely on a folk concept of intentionality that has evolved over a million years and has been refined in everyday social practice. Though folk judgements of intentionality are not perfect, they are well grounded in a systematic conceptual framework and thus provide the starting point for a comprehensive analysis of malingering as a social act. This chapter discusses the folk-conceptual and cognitive underpinnings of intentionality judgements and offers implications for a better understanding and handling of malingering. Important distinctions are introduced, such as between intentions (the mental state of being committed to act) and intentionality (the skilful and conscious performance of an intended action), and factors are identified that increase or decrease the validity of intentionality judgements. The picture of malingering painted here is one of a complex but tractable type of intentional action that is, in principle, no more elusive than other intentional actions people perceive and manage every day.
Malingering is typically defined as the intentional attempt to simulate or exaggerate illness symptoms in order to reach a consciously desired goal (e.g., health benefits, release from military duty). Because of its intentional and conscious quality, malingering is more blameworthy in our social and legal system than hypochondria, hysteria, or related disorders, which count as unintentional because their illness symptoms are caused by nonconscious factors (e.g., anxiety). However, the distinction between intentional and unintentional behaviour is often treated with suspicion. In particular, within the complex web of individuals and institutions who deal with the problem of malingering, nobody wants to make intentionality judgements. Investigators for the insurance industry or the government are only interested in “facts,” not judgements (even though, naturally, brute facts do not have the causal power to deny benefits or demand repayment; they have causal power only insofar as individuals judge them as relevant and decisive for the question at issue). Physicians focus on describing illness symptoms and organic deficits (or their absence) and claim that judgements about intentional deception lie beyond their professional expertise—they are the lawyers’ province. Lawyers, on their part, argue that they are no experts at distinguishing malingering from hysteria and would rather have the physicians make that call.

This avoidance of intentionality is misguided, and for two reasons. First, if malingering is distinct from hypochondria and if one of the distinguishing features is intentionality, then no parties involved can ignore the issue of intentionality. Second, intentionality judgements are made every day, by all social agents, and that has been the case for probably about a million years (Malle, in press-b; McWhinney, in press). Judging the intentions and goals of other people is a common social practice, and as such it is neither metaphysically impossible (as some philosophers have it) nor completely reliable. But if it weren’t the case that most people are correct in their intentionality judgements a
good part of the time, social interaction would be impossible, and the evolution of
humankind would have been halted long ago.

An adequate foundation for social and professional dealings with malingering must
involve a clear concept of intentionality. However, scholars of various disciplines have
long argued about the meaning intentionality without reaching a consensual understanding
of this phenomenon. Rather than add to the numerous expert definitions, I suggest a
different approach, namely to focus on the social cognition of intentionality. Social
cognition comprises the tasks and tools involved in the human interpretation behaviour,
and judgements of intentionality play a central role therein. These judgements have been
rendered reliable and socially shareable (see Freyd 1983) by the evolution of a folk
concept of intentionality. A folk concept operates like a filter that classifies certain
perceptual input into significant categories and thus frames or interprets the perceptual
input in ways that facilitate subsequent processing, including prediction, explanation,
evaluation, and action (Malle, in press-a). At least some folk concepts are historically and
cross-culturally stable, and there is good reason to believe that intentionality is one of
them (Ames 2001; Malle & Knobe 1997; Malle & Nelson, in press).

Three reasons make this approach compelling. First, malingering agents act in
accordance with their folk concept of intentionality—i.e., they generate action that is
intentional in their minds. Second, malingering agents conceal the true motives of their
actions in light of what they consider other people’s perceptions of intentionality—i.e.,
they try to behave in ways that do not appear intentional to others. And third, social
perceivers of malingering behaviour, such as physicians, insurance agents, jury members
or judges, cannot help but use their folk concept of intentionality to distinguish
malingering from genuine illness.
In this chapter, I thus introduce a definition of intentionality that is grounded in people’s social practice of judging intentionality, and I examine some of the features on which people base such judgements. This contribution does not solve the problem of judging intentionality in any particular case, but it lays the groundwork for an adequate approach to malingering in general by providing a systematic conceptual language that can be used in social as well as legal contexts.

1. The Concept of Intentionality

In court and in daily interactions, people regularly make judgements of intentionality. However, surprisingly little research has been devoted to the concept that underlies these judgements. A number of researchers have offered theoretical discussions (Heider 1958; Jones & Davis 1965; Fiske 1989; Shaver 1985), but their respective models disagree on the specific components that make up intentionality. Malle and Knobe (1997) therefore relied on an empirical approach to reconstruct the folk concept of intentionality, using qualitative and experimental methods.

In a first study, participants read descriptions of 20 behaviours and rated them for their intentionality, using an 8-point scale ranging from “not at all” (0) to “completely” (7) intentional. About one half of the participants received a working definition of intentionality before they rated the 20 behaviours. The definition read: “What do we mean by intentional? This means that the person had a reason to do what she did and that she chose to do so.” The assumption was that if people used their own folk concept to rate the behaviours, then there should be high agreement among participants with and without an experimenter-provided definition. Agreement was high in the whole sample. Any two people’s intentionality ratings showed an average intercorrelation of $r(20) = .64$, and any one person showed an average correlation of $r(20) = .80$ with the remaining group,
resulting in an inter-rater reliability of $\alpha = .99$. More important, the experimenter-provided definition had absolutely no effect on average agreement, so it appears that people share a folk concept of intentionality that they spontaneously use to judge behaviours.

The question now becomes what specific components, or “necessary conditions,” this folk concept has. Malle and Knobe (1997) answered this question in two steps. The first was to examine people’s direct and explicit definitions of intentionality; the second was to experimentally manipulate components of intentionality and thus demonstrate their reliable effect on judgements of intentionality.

A sample of 159 undergraduate students provided explicit definitions in response to the question “When you say that somebody performed an action intentionally, what does this mean?” Twenty participants (13%) provided only synonyms of the term intentionally (e.g., “on purpose,” “purposefully,” “deliberately”). Of the remaining 139 participants, 54% mentioned exactly one component, 31% mentioned two or more. After initial inspection of the definitions, two coders classified them into various categories, of which four reached substantial frequencies accounting for 96% of the meaningful definitions. These four categories were desire, belief, intention, and awareness. To qualify for the desire category, a definition had to mention the desire for an outcome or the outcome itself as a goal, purpose, or aim (e.g., “He did it in hopes of getting some result”). To qualify for the belief category, a definition had to mention thoughts about the consequences of the act or about the act itself (e.g., “She thought about the act and its effect”). To qualify for the intention category, a definition had to mention the intention to perform the act, or states of intending, meaning, deciding, choosing, or planning to perform the act (“She made a decision to perform the action”). Finally, to qualify for the awareness category, a definition had to mention awareness of the act while the person is
performing it (e.g., “He knows what he is doing”).

Each of these four categories was mentioned by a quarter to a half of participants, but none of the participants mentioned all four components, presumably because the instructions to this study (“What does it mean that...”) did not encourage exhaustive definitions. Significantly, however, those who mentioned two or more components drew careful distinctions between them. They distinguished, for example, between intention and desire: “The person meant to act that way and was motivated to do so”; between belief and intention: “Someone gave thought to the action beforehand and chose to do it”; between belief and awareness: “This person thought about the action before he did it and was fully aware of performing the action while he was doing it”; and between intention and awareness: “They decided to do something and then did it with full awareness of what they were doing”

The folk concept of intentionality, as reconstructed from explicit definitions, thus encompasses four components. For an agent to perform an action intentionally, the agent must have (a) a desire for an outcome; (b) beliefs about an action that leads to that outcome; (c) an intention to perform the action; and (d) awareness of fulfilling the intention while performing the action. To illustrate these components with a malingering behaviour, suppose person P wants to receive disability benefits [desire]. He learns that those benefits are given, for example, to workers who have done hard labour of at least five years (which is true for P) and display severe immobility in their joints or spine [beliefs]. He therefore plans to display exactly those symptoms to the company’s physician [intention]. During the exam, P executes his plan with specific attention to displaying immobility [awareness].

Some theoretical models of intentionality postulate a fifth component of skill or ability (e.g., Mele & Moser 1994), but people did not mention this component in their own
definitions. Malle and Knobe (1997) therefore conducted an initial study to explore whether skill may be implicitly used in people’s intentionality judgements, even if it was not explicitly mentioned.

In a vignette presented to 141 undergraduate students, a novice at darts surprisingly hits triple 20 (a very difficult throw) on his first try. His partner dismisses the throw as a fluke, so the novice tries again, this time missing badly. Surely, he wanted and tried to hit the triple 20 each time? Most participants (77%) agreed. But would people infer that he hit the triple 20 intentionally the first time? This was not the case, as only 16% said that he hit it intentionally. So most people felt that the novice tried or intended to hit the target, but, without any evidence of skill, they did not feel that he hit it intentionally. Instead, he got lucky. When the scenario was altered to suggest that the novice did have skill—he hit the triple 20 twice in a row—a significantly greater number of participants (55%) were willing to grant that he hit it intentionally even on his first try ($p < .001$).

These initial results suggested that people were sensitive to skill information when making judgements of intentionality. The skill component may have been omitted from explicit definitions because people focused on social behaviours, for which skill can be assumed, in contrast to, say, artistic or athletic behaviours, for which skill cannot be assumed. A more systematic study explored this possible fifth component of intentionality (Malle & Knobe 1997, Study 3).

If skill indeed plays a role, it could only be a necessary condition of intentionally performing an action, not a necessary condition of forming an intention. Forming an intention requires only a desire for an outcome and beliefs about an action leading to that outcome (and of course a process of reasoning to combine desires and beliefs; see Malle & Knobe 2001). Once the agent tries to execute that intention, however, skill will be
necessary for successfully acting as intended—to perform the action intentionally (not just out of luck or by accident). Thus, the prediction was that a skill component should be necessary for judgements of intentionality (whether the agent truly performed the action intentionally) but not for judgements of intention (whether the agent merely tried or planned to act a certain way).

A sample of 132 undergraduate students read a vignette that described a person named David flipping a coin to land on tails, which settled a debate among David and his friends over whether they should go to a movie or not. Additional information was experimentally manipulated to provide information about the presence or absence of David’s skill of making the coin land on the side he wants (“he has not been able to do better than chance” vs. “by now, he almost always succeeds”); desire (“he wants to see the movie” vs. “he does not want to see the movie”); and belief (David hears the suggestion that “tails” stands for going to the movie vs. he does not hear it). The awareness component was always implied to be present. Participants then answered two questions: “Do you think that David tried to make the coin land on tails?” and “Do you think that David made the coin land on tails intentionally?” (Some people were asked only one questions, others both, but the results were identical.)

As predicted, the presence of both belief and desire was necessary for an ascription of intention (81% for belief & desire vs. 21% for desire only and 31% for belief only), and the presence of skill was necessary for an ascription of intentionality (76% for belief & desire & skill vs. 3% for belief & desire only). This finding not only skill as a genuine component of intentionality but also highlights that people distinguish between judgements of intention (a mental state of planning or trying) and judgements of intentionality (the quality of an action performed intentionally). To return to the earlier malingering example of a person P trying to gain disability benefits, P must be capable of
Malle and Knobe (1997) thus proposed a five-component model of the folk concept of intentionality, displayed in Figure 1. According to this folk conception, the direct cause of an intentional action is the mental state of intention. For it to be ascribed, at a minimum a desire (for an outcome) and a belief (about the action-outcome link) must be present. For an action to be seen as performed intentionally, however, skill and awareness have to be present as well. The awareness component specifies the agent’s state of mind at the time of acting (knowing what he or she is doing), and the skill component refers to the agent’s ability to actually perform the action as he or she intended.

Occasionally, I meet experts in the law or sciences who are incredulous toward the finding that judgements of intention are distinct from judgements of intentionality. There can’t possibly be a meaningful difference, they argue, between intention and intentionality. But this incredulity appears to be a consequence of sloppy habits of speaking and thinking about the phenomena surrounding intentional action. In their role as ordinary social perceivers, I am confident, these experts will distinguish between someone who merely intended (planned, tried) to do something and another who also performed the planned action intentionally. To be convinced that the first agent had an intention they need only establish certain motives and beliefs and signs of a committed plan; they need not see her perform the action. To be convinced that the second person actually performed the action intentionally, more information is needed. Just learning that
the agent had an intention to so act is not enough, for the action itself could have been an accident or a lucky fluke. A skilful (i.e., controlled) and conscious performance is what makes the action intentional.

Cases in which agents had an intention but did not intentionally perform the planned action are not too hard to find. Consider the therapist who intends to cure her patient from severe depression. Now suppose the patient undergoes spontaneous remission. Did the therapist intend to cure the patient? Most definitely. Is the patient now cured? Indeed. Did the doctor intentionally cure the patient? Not so. She was merely lucky in getting the outcome she had hoped for. Less lucky is a prospective malingerer who intends to feign an illness but, surprisingly, contracts the very illness he tried to feign. Just because the person had an intention to malinger, we would not be justified in denying him an insurance benefit, because the person did not intentionally display his illness symptoms. Similarly, a person who has what she considers slight back pains might plan to present more severe pain during a medical exam. To that end, she walks in a hunched-over manner, but in so doing, falls when entering the physician’s office, acquiring through natural cause the severe back pains she had planned to feign. This person clearly does not malinger, even though she intended to. The folk distinction between intention and intentionality entails that an intention to malinger without conscious, skilful performance does not constitute intentional malingering.

A precise model of the folk concept of intentionality also highlights factors that help with the detection of malingering attempts. For example, the specific role of beliefs can be exploited. An agent who forms an intention to act must have certain beliefs about the link between her action and the desired outcome. If these action-outcome beliefs are altered, then the agent’s behaviour, insofar as it is intentional, will likely be altered as well. For example, if an agent presents with an illness from class A but is made to believe
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(falsely) that illnesses of class B yield greater insurance benefits or are less stringently probed by the pertinent institutions, then the agent may be induced to “switch” to illness B, thereby revealing intentionality. Similarly, if an agent is made to believe that the illness with which he is presenting characteristically includes symptom S (but in reality S never co-occurs with that illness), then the agent might begin to present with S and thereby expose his intentional control over the presentation.

In addition, because intentionality presupposes skill, a convincing illness deception will require a certain amount of sophistication, intelligence, and self-control. If the agent in question clearly lacks these attributes—for example, because of age, education, resources, mental capacity, or the like—an act of malingering becomes rather unlikely.

2. Judgements of intentionality

By recognising intentionality as a central concept of social cognition and analysing its defining components, we have made some progress in offering a clear and systematic vocabulary to discuss the phenomenon of malingering in medical and legal contexts. But a clear concept of intentionality is only one condition for the adequate study of illness deception. The second condition is to facilitate reliable detection of intentionality, which involves inferences of those mental states that define intentional action, particularly belief, desire, and intention.

Mental state inferences are made every day by human agents, and it is curious that experts often emphasise that one cannot really know what is in another person’s mind—with the tacit implication that one should not bother trying. But what notion of knowing is assumed here—certainty, without any room for doubt? If such certainty were required, there could be no guilty verdicts, no weather forecasts, and no medical diagnoses. For hundreds of thousands of years, humans have learned to infer what others
think, feel, or intend to do. Of course, these inferences are fallible, but had early hominids
given up trying to infer mental states merely because they could not reach certainty, *homo sapiens* would be without language, civilisation, and complex social relationships (Malle, in press-b).

There is consensus in cognitive science that the perception of intentional action is a key component of human social cognition, that it has evolved for its adaptive value in social interaction, and that it develops rather rapidly in the early years of childhood (Zelazo *et al.* 1999; Baron-Cohen 1999; Malle *et al.* 2001). We also know that adults judge intentionality automatically and with ease (Heider & Simmel 1944; Smith & Miller 1983) and that these judgements both regulate attention in social interaction and guide explanations and evaluations of behaviour (Malle, 1999; Malle & Nelson, in press; Malle & Pearce 2001). So how do people make these judgements?

2.1 Development and practice of intentionality judgements

During the first year of life, infants begin to identify intentional behaviour by attending to self-propelled movement (Premack 1990), eye-gaze (Farroni *et al.* 2000), and basic hand movements such as grasping or putting (Woodward *et al.* 2001). During the second year of life, they parse streams of behaviour into units that correspond to initiated or completed intentional actions (Baldwin *et al.* 2001), and they seem able to infer intentions or goals from incomplete action attempts (Meltzoff 1995). But early intentionality judgements also suffer from limitations. Children consider all outcomes that match a person’s desire as brought about intentionally (Shultz & Wells 1985), which shows their insensitivity to both the desire-intention distinction (Astington 2001; Moses 2001) and the skill component of intentionality.
In adulthood, we see an enriched concept of intention. Whereas desires are understood as mental states that can be directed at any conceivable object (even non-existent ones), intentions are regarded as mental states directed only at one’s own actions. Intentions, but not desires, are furthermore understood to result from a process of reasoning and to yield a characteristic commitment to action (Malle & Knobe 2001). In trying to detect intentions (and thereby often intentionality), social perceivers therefore look for indicators of reasoning and commitment, which are features that can be observed even before an action is performed.

Another later-developing indicator of intentionality is what Heider (1958) called equifinality—the characteristic pattern of intentional action to be repeated until its desired goal is reached. A homeowner who forgot her keys and therefore cannot enter her house through the door will look for an open window—seeking a different path toward the unchanging goal. A persistent malingerer will “adopt” a new illness if the initial professed illness did not lead to the desired benefits.

Adults also increasingly base their inferences of intentionality on heuristic principles, general knowledge, or social scripts. For example, certain contexts, classes of behaviour, or types of agents may so strongly suggest intentionality that the perceiver does not even process the relevant component information (presence of beliefs, desires, etc.) but simply presumes intentionality. This tendency makes the judgement process faster and more efficient but also exposes it to serious distortions (cf. Dodge & Schwartz 1997; Crick 1995). For instance, angry affect in conflict situations, partisanship, and prejudice often lead to biased intentionality judgements. It should be noted, however, that novel, ambiguous, and high-stakes situations are likely to encourage a more systematic strategy of observing behavioural details and gathering information about the agent’s mental states.
2.2 In search of objective markers of intentionality

So far I have focused on the perceiver’s conceptual assumptions and cognitive strategies in inferring intentionality. But are there objective features of intentional action that can be used to make one’s intentionality judgements more accurate? The evolutionary significance of intentionality perceptions would suggest that at least some of the perceiver’s assumptions and strategies will validly correspond to a reality of intentional action, just as colour and spatial perception shows a correspondence with the physical reality of light and space (Shepard 1994). But we must keep in mind that intentionality may be, in part at least, a social construction that characterises certain behaviour patterns as intentional, whether or not they truly are intentional (and whether or not intentionality is a genuine attribute of human behaviour). This is, however, exactly where the strength of the folk-conceptual approach lies: It examines the conditions under which people (workers, lawyers, physicians, and all the rest) ascribe intentionality, and these conditions are located both in the head of the perceiver and in the head (or body) of the agent. Research on the latter is rather slim, but we can identify at least some candidates of intentionality indicators (Baird & Baldwin 2001; Carpenter, et al. 1998; Dittrich & 1994).

*Coordination of body parts moving relative to each other.* Here, the classic case is hand-eye coordination, which is a developmental achievement during infants’ first year. Coordination indicates integration of motor plans with sensory information, making the resulting behaviour more responsive to the environment, better controlled through a corrective feedback loop, and thus more skilled and intentional. Another case of coordinated patterns is the gaze shift in preparation for action. Before humans perform an action that involves movement (e.g., getting up from a chair to close the window), they tend to first turn their head and gaze in the direction of the planned move, indicating the
early phase of executing an intention. Talented athletes in basketball, soccer, football, and the like take advantage of the ordinary perceiver’s strong response to these intention indicators when they use head fakes and body fakes to make the other move in one direction while they then quickly move in the other direction.

*Systematic object interactions.* Many intentional actions involve the interaction with and manipulation of objects. These objects are often represented in the contents of the agent’s mental states (desire, belief, intention) and thus reveal something about the means and ends of the action in question. Object manipulations can also reveal the level of skill and control involved in a behaviour, and patterns of disengaging and re-engaging with objects signify equifinality.

*Spatial information of the moving body.* Whereas many unintentional behaviours are nondirected and display sudden and unpredictable speed shifts, intentional actions show clearer direction, more even speed, and smoothness of execution. These features can sometimes convey the agent’s goals and specific action plans, but more reliably they highlight the level of skill involved in the behaviour. Close replication of movement patterns also indicates skill and is reliably used by people to assess intentionality (Malle 1994; Malle & Knobe 1997).

*Emotional reactions to action completions.* A successful intentional action is executed as intended and brings about the outcome that was desired. This match between mind and world typically leads to expressions of pleasure, such as smiles, nods, and approving exclamations (“there!”; “all right”). By contrast, mismatches are typically followed by expressions of displeasure, such as frowns, turning away in disgust, head shakes, and distancing exclamations (“oops”; “oh no!”). The problem with this indicator set, however, is that it cannot by itself distinguish between an outcome that happens to match one’s desire and an outcome that was intentionally brought about. The soccer
player’s high-arching free kick that suddenly drops under the crossbar will be celebrated with fist pumps whether it was intentional or a wind-swept fluke. Additional indicators of movement, execution, and environmental interference will always have to complement the interpretation of emotional reactions.

3. Conclusion

Social, political, and legal dealings with malingering require clarity about the phenomenon of intentionality. The approach taken here does not rely on specialised definitions of intentionality often found in legal or other expert contexts. Instead, it focuses on the folk concept of intentionality that underlies ordinary people’s perceptions of human behaviour. Consequently, the picture of malingering painted here is one of a complex but nevertheless tractable kind of intentional action that is, in principle, no more elusive than other intentional actions that people perceive and manage every day.

I have argued that the ordinary social cognition of intentional action—by jury members, physicians, or lawyers—is a good starting point for assessments of intentionality. Lay judgements of intentionality are based on a reliable and sophisticated folk concept that offers a systematic vocabulary with which to examine the phenomenon of malingering. In addition, over a period of several hundred thousand years, humans have evolved to detect intentionality and to infer mental states; and though far from being perfect, they are overall quite successful at this task.

Empirical research is also emerging that specifies which factors increase or decrease the success of people’s intentionality judgements. On the side of increasing success are such factors as explicit deliberations about each component of intentionality, attendance to equifinality, and careful observation of behaviour preparation, movement execution, and subsequent emotional reactions. On the side of decreasing success are such
factors as the perceiver’s self-interest in the outcome of the judgement, negative affect
toward the agent, and reliance on heuristics, scripts, and categorical assumptions.
Physicians, investigators, and lawyers involved in the problem of malingering are
therefore be well advised to have a basic trust in their lay judgements of intentionality but
also to become sensitive to the factors that moderate the quality of these judgements.
4. References


Belief  Skill

Desire  Awareness

Figure 1

A model of the folk concept of intentionality (adapted from Malle & Knobe 1997)