Inferences about character and motive influence intentionality attributions about side effects

Jamie S. Hughes¹* and David Trafimow²
¹Daemen College, Amherst, New York, USA
²New Mexico State University, Las Cruces, New Mexico, USA

In two studies, we predicted and found that inferences about motive and character influence intentionality attributions about foreseeable consequences of action (i.e., side effects). First, we show that inferences about intentionality are greater for good side effects than bad side effects when a target person's character is described positively. In Study 2, we manipulated information about a target person and found that inferences about intentionality were greater when side effects were consistent with a target person's character and motives. Overall, our data cast doubt on the generality of the side-effect effect. We discuss our findings and their implications for future research on intentionality and social perception.

Intentionality is often defined as an action that was intended and compatible with an actor's goals (Bratman, 1987; Schmidt, 1976), or as an action that produces an outcome that is desired and foreseen (Forguson, 1989, p. 7). Intentionality may be one of the most important concepts for attribution; as perceivers try to understand behaviour, they make inferences about an actor’s mental states and search for indications that the actor desired and had knowledge of an outcome (Malle, Knobe, O’Laughlin, Pearce, & Nelson, 2000; Reeder, 2009). Inferences about people’s states of mind help us assign blame or praise, and provide punishment or accolades.

Folk notions about intentionality have been examined in psychology and philosophy (Kashima, McKintyre, & Clifford, 1998; Knobe, 2003a, 2003b; Mele, 2003; Nadelhoffer, 2004). For example, Malle and Knobe (1997) found that when people were asked about intentionality they agreed substantially in their judgments regardless of whether they were given a definition or not, and they spontaneously listed at least four components. The components participants listed included desire and beliefs about the consequences of action, an intention to perform the act, and awareness of performing the action. Malle and Knobe (1997) suggested that understanding the processes by which people infer intentionality can assist investigators in understanding its conditions of accuracy and bias, and methods for improving judgmental sensitivity.
If an action is intentional it requires, at minimum, a desire for an outcome and knowledge about consequences (Forguson, 1989; Kashima et al., 1998). However, there are cases in which a person initiates and desires an outcome, but discovers that the action will cause more than one consequence; this situation is often termed a side effect. A side effect occurs when a person realizes that two or more consequences will occur, but only desires one of the outcomes. Imagine, for example, that you ask a friend out for dinner but realize that your friend has a teenaged house guest whom she must bring along. If you go to dinner anyway we might ask if having dinner with a teenager was intentional, even if you only desired to visit with your friend.

Recent studies in experimental philosophy have centred on attributions about these undesired yet foreseeable side effects of action. In one study, Knobe (2003b) asked participants to read the following scenario and judge whether the side effect was intentional.

The vice president of a company went to the chairman of the board and said, ‘We are thinking of starting a new program. It will help us increase profits, but it will also help (or harm) the environment’. The chairman of the board answered, ‘I don’t care at all about helping (or harming) the environment. I just want to make as much profit as I can. Let’s start the new program’. They started the new program. Sure enough the environment was helped (or harmed).

An asymmetry emerged such that 85% of participants rated the chairman’s behaviour as intentional when the environment was harmed, but only 23% believed the chairman acted intentionally when the environment was helped. The finding that bad side effects are judged as intentional, and good side effects are judged as unintentional has been termed the side-effect effect (SEE), or Knobe effect, and has been replicated using similar scenarios (Cushman & Mele, 2008; Leslie, Knobe, & Cohen, 2006; McCann, 2005; Mele & Cushman, 2007; Nadelhoffer, 2004; Nichols & Ulatowski, 2007; Phelan & Sarkissian, 2008).

Knobe (2003a, 2003b, 2005; Knobe & Mendlow, 2004) claimed that individuals make spontaneous moral evaluations regarding bad outcomes. An intuitive, negative reaction to a bad side effect is thought to influence additional processing in the following way. In the bad side effect scenarios, a perceiver’s negative evaluation of the side effect influences his or her judgments about intentionality. Although the consequence was undesired, perceivers seem to believe that the outcome was intentional. In the positive side effect conditions, where negative evaluations do not influence judgments, perceivers realize that the consequence was undesired and therefore do not judge the side effect as intentional.

In a later paper, Knobe (2005) stated that good or bad outcomes may influence intentionality attributions, which in turn, affect judgments about blame or praise. However, no empirical evidence, to our knowledge, has shown that positive side effects result in greater intentionality attributions than negative side effects. Instead, it appears that there is a negativity effect whereby perceivers are more highly influenced by bad side effects than good ones. Interestingly, the side-effect effect (henceforth SEE) is not driven by an emotional response (Knobe & Mendlow, 2004). When participants were given stimulus materials designed to minimize affect laden responses (e.g., they were asked about the intentionality of the side effect of decreased sales caused by a sales manager) the negativity effect remained.

We believe that the SEE (or negativity effect) is a product of the characteristics of the investigated scenario. Specifically, there were a number of confounds in Knobe’s
Side effects

chairman scenario. First, the target person - the chairman - may be unnecessarily negative. People do not trust, nor do they particularly like business executives - the Enron scandal and recent catastrophe on Wall Street have done little to improve this negative image. Second, the business executive in the scenario holds negative motives. He is only interested in making a profit; greed and ruthless self-interest are bound to create a negative impression. Finally, in the original scenario the chairman states, 'I don't care at all about harming (or helping) the environment'. Understandably, to create a side effect a person must be aware that his action will cause more than one consequence, and at the same time, not desire that the side effect occur. However, perhaps it is not normative for someone to have such a careless attitude towards the environment. Even if someone values profit above all else, one should be pleased to hear that a particular programme will result in profit and benefit the environment. If one’s programme benefits the environment then one can at least appear a humanitarian who cares about the environment. Although, these weaknesses do not necessarily eliminate the SEE, they point to an alternative hypothesis. Specifically, if a target person has a negative character and negative motives, people are likely to believe that he intentionally creates bad side effects instead of good side effects.

In the current paper, we advance the hypothesis that perceivers utilize numerous mental state and dispositional cues when making sense of others' actions. This proposal is not particularly controversial. A number of studies support the idea that people strive to integrate information into a coherent and meaningful impression by obtaining a sense of how a target person’s character, motives, and behaviour fit together (Asch, 1946; Read, 1987; Read, Jones, & Miller, 1990; Read & Miller, 1993; Reeder, Vonk, Ronk, Ham, & Lawrence, 2004).

Our hypothesis that perceivers use information about a target person’s character and motives when attributing intentionality is risky because it goes against early theorizing which suggests that perceivers decide whether or not an action is intentional and then proceed to make sense of the behaviour (Heider, 1958; Jones & Davis, 1965; Shaver, 1985). That is, once a decision about intentionality is made, social perceivers explain the behaviour in terms of the situation or the actor. According to this view, information about a target person’s motives and character should not influence judgments about intentionality.

In contrast, our perspective aligns with more recent research on intentionality attributions. For example, Guglielmo and Malle (2010) found that intentionality attributions about side effects are guided by inferences about an actor’s desires. This finding supports our hypothesis that motive attributions influence inferences about intentionality. The ‘deep self’ view advanced by Sripada (2010) is also consistent with our perspective. Sripada (2010) suggests that when perceivers make inferences about intentionality they attend to a person’s immediate beliefs, desires, and intentions (the so-called acting self), and a person’s enduring character, attitude, and/or morals (the so-called deep self). Our predictions align with the deep-self view of intentionality - we suggest that both a target person’s immediate motives and his or her character will influence intentionality attributions.

In the current paper, we examine whether perceivers use several pieces of evidence to form a coherent and meaningful understanding of how an actor’s motives, character, and actions fit together. More specifically, we explore the prediction that intentionality attributions are influenced by an actor’s motives and character. Our hypothesis differs from early theories that posit that intentionality attributions are a pre-requisite for character and motive attribution and is inconsistent with Knobe’s perspective that the valence of the side effect should predict intentionality attributions.
Two studies are reported here. First, we investigate intentionality attributions about side effects created by a positive target person with positive motives. In Study 2, we manipulate a target person’s character and motives and extend the findings of Study 1 using a different scenario. We should note that we are using the term motive (rather than goal or desire) mainly because it aligns with person perception and impression formation literatures (see Reeder, 2009) which drive our main hypotheses.

**STUDY 1**

To test our prediction that character and motive inferences influence intentionality attributions about side effects, we asked participants to read a scenario about a doctor who was described positively, negatively, or neutrally. Unlike the chairman scenario described above, the doctor was described as having a very honourable motive – he seeks to cure cancer; this motive was held constant across different descriptions of his character. We predicted that this manipulation would reverse the SEE; that is, intentionality attributions would be higher for good rather than bad side effects. Just as a greedy chairman was seen as more likely to intentionally create a bad side effect, it is reasonable to expect that an extremely honourable doctor would be seen as more likely to intentionally create good side effects. We expected intentionality attributions about good side effects to be greatest in the positive target person condition, followed by the neutral and negative target person conditions. Further, we predicted intentionality attributions about bad side effects to be greatest in the negative target person condition.

**Methods**

**Participants**

Seventy-one students (37 female) at a southwestern university in the United States participated in exchange for partial course credit. Participants were 20 years of age on average ($SD = 2.26$).

**Materials and procedures**

Participants read a scenario about a doctor, named Chris, with positive, negative, or neutral characteristics. The scenario described a situation in which Chris successfully cured cancer but the medication had a foreseeable side effect of increasing or decreasing viral infections. Participants read, ‘Chris is a doctor’. Then, in the positive target person condition participants read: ‘He has spent much of his life helping others. He has volunteered in third world countries and has conducted research in hopes of helping people’. In the negative scenario, participants read, ‘He has spent much of his life treating patients. He has recommended unnecessary surgeries to gain money and has conducted research in order to gain profit’. Finally, in the neutral scenario participants read, ‘He has spent much of his life treating patients and conducting research’. Participants then read the following passage.

Chris recently developed a new drug he believed could cure cancer. The drug was made from ingredients known to influence viral infections. Chris administered the drug to a sample of cancer patients. The drug reduced the number of cancer cells in the patients' bodies,
Table 1. Percentage of intentionality attributions by side effect condition (N = 71)

<table>
<thead>
<tr>
<th></th>
<th>Good side effect</th>
<th>Bad side effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive target</td>
<td>88.9%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Neutral target</td>
<td>73.3%</td>
<td>46%</td>
</tr>
<tr>
<td>Negative target</td>
<td>53.8%</td>
<td>50%</td>
</tr>
</tbody>
</table>

indicating that the drug worked. Chris also found that the drug (decreased/increased) a wide range of viral illnesses such as the common cold.

In summary, a 3(Target Person: positive vs. negative vs. neutral) × 2(Side Effect: good vs. bad) between participants design was used. After reading the scenario, participants judged whether or not the actor had caused viral infections intentionally.

Results

A chi-square test was used to examine intentionality attributions by Side Effect and Target Person (see Table 1). Supporting our hypothesis, a greater proportion of participants attributed intentionality in the positive target person, good side effect condition (88.9%) than in the bad side effect condition (18.2%), χ² (1, N = 20) = 9.89, p = .002, Ψ = −0.71. However, intentionality attributions about negative target persons did not differ significantly in the good side effect (53.8%) or bad side effect conditions (50%), χ² (1, N = 23) = 0.03, p = .85, Ψ = −0.04. Further, there were no differences between intentionality judgments about good (73.3%) and bad (46%) side effects in the neutral target person condition, χ² (1, N = 28) = 2.16, p = .14, Ψ = −0.28.

Discussion

Consistent with our hypothesis, the SEE was reversed in the current study. Perceivers were more likely to judge positive side effects as intentional when the target person was described positively and had positive motives. In each target person condition, more participants attributed intentionality in the good side effect condition rather than the bad side effect condition, and within the positive target person condition the difference between intentionality attributions about good and bad side effects was significant. Interestingly, participants attributed intentionality to a greater extent in the good side effect, positive target person condition even though it is more common that treatments cause negative side effects. In other words, while both the good and bad side effects were rather minor (increased or decreased colds) participants were more likely to infer intentionality when the target person and outcome were consistent.

STUDY 2

Study 1 provided evidence that inferences about an actor’s character affect intentionality attributions. However, there were a number of potential problems with the scenario used. For example, the motive to cure cancer was not only positive, but extremely
positive. It is possible that the SEE reversal was due to this extremity. Further, the scenario described medical research and development where side effects are both common and expected. Therefore, the SEE reversal might not generalize to other situations. Finally, in Study 1 only a target person’s character was manipulated; we have not shown evidence that motives affect intentionality attributions. Study 2 was designed to address these issues.

We had two additional reasons to conduct Study 2. First, it is important to show that positive and negative information about a target person will affect intentionality judgments. In Study 2, by manipulating both character and motive information we were able to examine intentionality attributions about bad side effects when targets are described negatively. Further, our hypotheses suggest that perceivers search for coherent and consistent information to form holistic impressions of others. Thus, it would be advantageous to explore intentionality attributions in consistent conditions (in which motive, character, and side effect valence match) and inconsistent conditions. We predicted that attributions about intentionality would be stronger when information in the scenario is consistent and allows perceivers to form coherent impressions. In other words, we predicted that bad side effects would be seen as more intentional than good side effects when the actor held negative motives and was described negatively, but that good side effects would be seen as more intentional than bad side effects when the actor held positive motives and was described positively.

**Methods**

**Participants**
One hundred and twenty-one (72 female) students from a southwestern university in the United States participated in exchange for partial course credit. Participants were 19 years of age on average ($SD = 2.57$).

**Materials and procedure**
Participants read a scenario about a senator named Dan who was described positively or negatively. The scenarios included positive or negative information about the target person’s motives, and participants read that his action lead to a foreseeable good or bad side effect. We characterized motives as negative or positive rather intuitively and used educational quality because we believed that this topic would be particularly relevant to students. In the negative motive condition, the senator aims to decrease the quality of education, whereas in the positive motive condition he aims to increase the quality of education. In the positive target person condition, participants read, ‘Dan is a senator. He entered into politics because of his desire to increase justice and maximize freedom’. In the negative target person condition, participants read, ‘Dan is a senator. He entered into politics because of his desire for money and power’. Then participants read the following.

Dan has been working on a bill that will (decrease/increase) the quality of education. While working on the bill Dan realized that if the bill passed it would influence the environment. Dan succeeded in passing the bill and as a result the environment was (harmed/helped).

In summary, participants were randomly assigned to one of eight between participant conditions using a $2$(Motive: positive vs. negative) $\times$ $2$(Target Person: positive vs.
Results

We analyzed intentionality judgments by Motive and Target Person using chi-square tests (see Figure 1). In the positive motive conditions, a larger proportion of participants attributed intentionality to positive target persons who produced good side effects (55.6%) than bad side effects (23.5%), $\chi^2(1, N = 35) = 3.74, p = .053, \varphi = 0.33$. However, this effect was only marginally significant. There were no significant differences between intentionality attributions about good and bad side effects in the positive motive, negative target person conditions, $\chi^2(1, N = 27) = .19, p = .66, \varphi = 0.09$, or the negative motive, positive target person conditions, $\chi^2(1, N = 28) = .06, p = .81, \varphi = 0.05$. A significant difference between intentionality attributions about good and bad side effects was found for negative target persons who pursued negative motive, $\chi^2(1, N = 31) = 3.90, p = .048, \varphi = 0.35$. In line with the SEE, a larger portion of participants judged bad side effects as intentional (69.2%) compared to good side effects (33.3%).

Another way to test our predictions regarding intentionality attributions about good and bad side effects is to examine whether intentionality attributions were greater for bad side effects caused by negative targets with negative goals, or for good side effects caused by positive targets with positive goals. As expected, a chi-square test showed no significant differences, $\chi^2(1, N = 35) = 2.89, p = .089, \varphi = 0.31$. As a final test, we examined whether intentionality attributions were greater in consistent compared to inconsistent conditions. Intentionality attributions about good and bad side effects when character and motive information was consistent (positive or negative) was compared to attributions about side effects in inconsistent conditions. As expected, for positive target persons with positive motives, the frequency of intentionality attributions were
higher in the good side effect, or consistent condition (55.6%) than in the bad side effect or inconsistent condition (23.5%), $\chi^2 (1, N = 35) = 3.74, p = .053, \varphi = 0.33$. However, this effect was only marginally significant. A similar trend was found for negative target persons with negative motives. Intentionality ratings were more frequent in the bad side effect (69.2%), consistent condition than in the good side effect, inconsistent condition (33.3%), $\chi^2 (1, N = 31) = 3.89, p = .048, \varphi = 0.35$.

**Discussion**

Consistent with our predictions, the SEE was found when the target person’s character and motives were negative, and the reverse of the SEE was found when the target person’s character and motives were positive. Further, the current findings replicate and extend the data presented in Study 1. More importantly, there were no differences between intentionality attributions for consistently positive target persons who created good side effect or consistently negative target’s who created bad side effects, thus providing evidence against negativity effects. Also important, significantly more participants attributed intentionality when a target person created a side effect that was consistent with his character and motives than when he created a side effect that was inconsistent with his character and motives. These findings provide substantial evidence in favour of our hypotheses.

Recently, Uttich and Lombrozo (2010) provided evidence that perceivers are more likely to attribute intentionality about side effects when an actor’s behaviour violates a norm. Specifically, a norm violating behaviour may be more indicative of an actor’s desires or motives than a norm conforming behaviour. Guglielmo and Malle (2010) have advanced a similar idea, which suggests inferences about motives or desires are greater when an actor’s behaviour violates a norm. Thus, in the chairman of the board scenario it is not normative for the chairman to state that he doesn’t care at all about harming the environment. Guglielmo and Malle (2010) found that participants inferred desire when the chairmen harmed the environment but not when he helped the environment (Study 1). Also, when they changed the scenario by creating a regretful chairman, both desire and intentionality attributions decreased relative to the original scenario (Study 4a).

Study 2 may appear to refute the norm violation hypothesis. However, upon closer inspection, our data do not provide evidence for or against the hypothesis for two reasons. First, in the Study 2 scenarios, there were no confounds related to norm violations or non-normative beliefs. The senator did not state that he cared or did not care about the side effect; he simply foresees that his action will cause more than the desired consequence. Second, the inconsistent conditions (in which the target person’s character and motives do not match the side effect) are not actually norm violations. Instead, in the inconsistent conditions, participants read about a person whose character was or was not consistent with his motives, actions, and foreseeable outcomes. This is different than holding a non-normative belief or attitude as in the original scenario. Thus, we believe that while it may be unusual for positive or negative characters to pursue out of character outcomes it does not necessarily violate a norm. Nonetheless, both Guglielmo and Malle (2010) and Uttich and Lombrozo (2010) suggest that norm violations increase motive or desire inferences, which in turn increases attributions about intentionality – and our data certainly support this hypothesis.
GENERAL DISCUSSION

We predicted and found that inferences about an actor’s character and motives influence intentionality attributions about side effects. Side effects are defined as foreseeable but undesired consequences that occur during goal pursuit. Although some research has found that perceivers judge bad side effects as intentional and good side effects as unintentional, our research shows that intentionality attributions about side effects depend on perceptions regarding a target person’s character and motives.

In Study 1, intentionality attributions were greater for good side effects when an actor was described positively and had positive motives, but attributions about good and bad side effects did not differ when the actor was described negatively or neutrally. Study 2 demonstrated that both an actor’s motives and character are important when judging good and bad side effects. Participants attributed intentionality to bad side effects, but not good side effects when the actor’s motives and character were described negatively. Also, more participants attributed intentionality to good side effects than bad side effects when an actor’s motives and character were described positively. However, this effect was only marginally significant ($p = .053$). Importantly, intentionality attributions about side effects were greater when the valence of the information about the actor’s character and motive was consistent rather than inconsistent with the valence of the side effect.

Overall, our data support the proposition that perceivers make multiple inferences when trying to understand others (Reeder, 2009). Also, our findings are consistent with Read and Miller’s (1993, 1998, 2005) parallel constraint satisfaction model, which suggests that numerous explanations are activated when social perceivers observe an action. Possible explanations include information about an actor’s mental state, intentionality, character, and information about the situation. Perceivers evaluate each possible explanation in terms of coherence and consistency. Read and Miller (1993) have found that the more an explanation is coherent, the more a perceiver understands of an event. In the studies reported here, the largest proportion of intentionality judgments were found in consistent conditions – when a target person held negative motives, was a mean or horrible person, and caused a bad side effect, or when an exceptional person pursued positive motives and caused good side effects.

In the field of social psychology, it has long been believed that intentionality attributions are the starting point of subsequent inferences regarding an actor’s character, motives, blameworthiness, or guilt (Heider, 1958; Shaver, 1985). However, our research suggests that intentionality attributions about side effects are influenced by inferences regarding an actor’s character and motives. Supporting coherence models of social perception (Pennington & Hastie, 1992; Read & Miller, 1993; Reeder, 2009; Trafimow, 2009), our data suggest that intentionality attributions about side effects do not occur prior to inferences about motive and character.

The current paper leaves an important question unanswered. That is, we examined intentionality attributions about objectively unintentional behaviours. Side effects are objectively unintentional because only one component of intentionality is present, namely one’s knowledge about the consequences. Also, side effects of action are somewhat ambiguous in terms of intentionality because the actor may have had a choice to act otherwise—to quit the new programme that would harm the environment, or come up with a new medication rather than increase infections. We did not examine if inferences about character and motives affect intentionality attributions about objectively intentional behaviours, or actions that an actor performs with both
desire and knowledge about consequences. Popular opinion is that perceivers do not process information about an actor’s character or motives when an action is unintentional (e.g., a person trips and falls down a flight of stairs) but will make these inferences if the action is intentional (e.g., a person robs a store) (Malle et al., 2000; Reeder, 2009). However, when an action is ambiguous inferences about character and motive may assist a perceiver in piecing together a coherent story or narrative (Reeder & Trafimow, 2005; Trafimow, 2009). Future research should examine the possibility that perceivers form an overall impression while striving to understand others actions.

Contrary to previous research, we did not find negativity effects *per se*. As stated previously, Knobe (2003a, 2003b, 2005; Knobe & Mendlow, 2004) has explained the SEE in terms of the negativity of bad side effects. However, perceivers did not judge bad side effects as more intentional than good side effects across the board, and thus they could not have been responding to the negativity of the bad side effects alone. Instead, intentionality attributions were consistent with the character and motives of the actor.

It is possible to argue that we did not correctly manipulate the SEE because the target persons in the scenarios used did not explicitly deny a desire for the side effect. Thus, we cannot be certain whether attributions about desires affected inferences about intentionality. Stated another way, information about character and motives may affect inferences about a target person’s desire for the side effect, which in turn, influences intentionality attributions about the side effect. This possibility is consistent with Guglielmo and Malle’s (2010) research. They suspected and found that when the chairman in Knobe’s original scenario explicitly stated that he didn’t care at all about the environment, participants believed that he had a modest desire to harm the environment, whereas when the chairman made the same statement about helping, participants believed that he truly did not wish to benefit the environment. Rather than replicate this confound by using explicit language, the scenarios were designed to show that a foreseeable outcome occurred while an actor pursued a separate goal. Our data suggest that whether or not desire is explicitly stated in the scenario, perceivers are likely to make inferences that are coherent and consistent with their impressions of the target person. Though we believe that we tested side effects, further theoretical and empirical debate is needed about whether or not inferred desires for unintended effects imply that they are longer ‘true’ side effects.

Importantly, we do not believe that character and motive judgments are the only factors that perceivers consider when making sense of others actions and there have been a number of alternative hypotheses advanced (Adams & Steadman, 2004; Cokely & Feltz, 2009; Cushman & Mele, 2008; Guglielmo & Malle, 2010; Knobe, 2005; Machery, 2008; Nadelhoffer, 2004; Nichols & Ulatowski, 2007; Phelan & Sarkissian, 2008; Sripada, 2010; Uttich & Lombrozo, 2010). For example, the SEE may be influenced by attributions about blame or praise as well as the extremity of the side effect (Nadelhoffer, 2004). If an unintended side effect of a goal-directed action includes killing a number of innocent civilians, then it probably does not matter if the actor is saintly or positively motivated. Perceivers may still judge the side effect as intentional as long as the consequence was foreseen.

Another possibility is that perceivers weigh the costs and benefits of the actor’s goal and the undesired side effect (Machery, 2008). This hypothesis works well for Study 1. Only 50% of participants attributed intentionality to the doctor who cured cancer even
When he was described negatively. The benefit of curing cancer far outweighs the cost associated with cold viruses.

This discussion suggests a number of directions for further research. First, as we did not investigate attributions about praise and blame, it is not clear what role they play in intentionality attributions about side effects. We suspect that perceivers use multiple cues to attribute not only intentionality but also responsibility, blame, or praise. Second, in addition to manipulating information about a target person’s motives, researchers should examine the influence of the side effect to determine whether the extremity of the side effect itself determines intentionality attributions or if perceivers estimate the trade-off between the goal and its undesired side effect. Another avenue for future research follows from what Sripada (2010) describes as an actor’s deep self. The current studies showed that an actor’s character influenced intentionality attributions, but would an actor’s attitudes and values also affect judgments about intentionality? For example, would a particular political behaviour be seen as more intentional if the target person held liberal or conservative attitudes?

The purpose of social perception is to understand and explain other’s actions; perceivers get into other’s heads, read minds, and use heuristics to determine reasons for acting. These reasons for acting often include the person’s actions, beliefs, knowledge, traits, motives, personal history, and the situational context. This confluence of factors or coherence perspective of social perception was supported in the current article and may help others to create unique and risky predictions regarding attributions about intentionality.

**Acknowledgements**

We would like to thank Mark Painter, Angela Sedillo, Christian Jokinen, and Angelica Vasquez for their help with data collection. We would also like to thank three anonymous reviewers for their helpful suggestions on an earlier version of this manuscript.

**References**


*Received 9 November 2010; revised version received 30 March 2011*