YOUR FREEDOM TO CHOOSE IS IMPORTANT TO ME, ISN'T IT?

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DECLARATION

I, Maleshoane Lejakane (student number 51069733), declare that **YOUR FREEDOM TO CHOOSE IS IMPORTANT TO ME, ISN'T IT?** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. I further declare that I have not previously submitted this work, or part of it, for examination at UNISA for another qualification or at any other higher education institution.

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ABSTRACT

Being socially mindful is important for constructing and maintaining social relationships and social interactions. Social mindfulness, which requires an acknowledgement of another person's interests and needs, is reduced when the other person is perceived as a member of the upper social class as shown repeatedly for relatively socially and economically better off majority groups from Western, Educated, Industrialised, Rich, Democracies (i.e., WEIRD countries). The overall question addressed in the present research project asked, and tested in two experimental studies (Study 1: N = 266; Study 2: N = 448) whether these findings also hold for relatively socially and economically worse off majority groups in non-WEIRD countries. Different from previous findings, the results for the South African sample showed that the other person's social class does not influence social mindfulness and that only objective self-social class but not subjective self-social class is related to social mindfulness. More specifically, the results showed that the majority group (i.e., Black South Africans) was less socially mindful than the minority groups (i.e., White, Indian, and Coloured South Africans) which, however, are not explainable by economic differences alone. These findings have significant implications for research on social mindfulness and social class in non-WEIRD contexts.

Keywords: Social mindfulness, prosocial behaviour, cooperation, social class, social value orientation, prosocial personality

Introduction

It is often small gestures such as being offered a choice by others that make us feel socially minded and recognised. But what enables individuals to be socially mindful of each other? According to Van Doesum et al. (2013), it is the ability to be thoughtful of others' needs and interests before making decisions (see also Van Lange & Van Doesum, 2015). For instance, we might intentionally not take the last piece of white chocolate on a tray of dark chocolate and thus leave the next person with a choice. Leaving the other something to choose from, means being socially mindful. Being mindful that one's actions have implications for others – as small as these actions might appear – is not only considered important for developing and maintaining meaningful interpersonal but also cooperative relationships (Dou et al., 2018).

Even though people have the ability to be socially mindful, they sometimes choose not to be. Whether people are socially mindful depends on both intra-individual factors such as personality and trust (Van Doesum et al., 2013; 2018) and situational and contextual factors such as the presence and the socio-economic background of the other, respectively (Van Doesum et al., 2017; 2018). More specifically, people tend to be more socially mindful when they possess personality traits such as honesty-humility and agreeableness (Van Doesum et al., 2013, Study 4) and when they trust others (Van Doesum et al., 2013, Studies 2a and 2b). People tend to be also more socially mindful when the other is physically present (Van Doesum et al., 2018) and when the other is from a low rather than high social class (Van Doesum et al., 2017, 2021).

Although the findings concerning factors such as social class are seemingly robust among the relatively socially and economically better off majority groups in the societal contexts of Western, Educated, Industrialised, Rich, Democracies (i.e., WEIRD-countries,

Henrich, 2020) such as the Netherlands, the United States, and the United Kingdom, the question arises whether these findings also hold for the relatively socially and economically worse off majority groups in non-WEIRD countries. In two studies, we explored the question of *how* social class is related to social mindfulness within the societal context of South Africa, which for a long time has experienced not only extreme social and economic inequality but also poverty in its extreme form among the majority (i.e., Black South Africans), whereas the minorities (i.e., White, Indian and coloured South Africans) are socially and economically better off (World Bank, 2019, see also World Bank, 2022). Understanding the situational and contextual factors that are related to social mindfulness is important as social mindfulness is considered one of the necessary conditions for cooperating with others to achieve desired and common goals (Dou et al., 2018). Given the current large-scale threats such as inequality, poverty, climate change, and pandemics, cooperation between different people and groups is paramount as these threats require collective responses. Thus, identifying psychological factors that either encourage or prevent social mindfulness will help to extend our understanding of favourable conditions for cooperation.

Social Mindfulness as Prosocial Behaviour

Social mindfulness is a form of prosocial behaviour. Prosocial behaviour is commonly defined as actions that are also beneficial to others such as helping, sharing, donating, volunteering, and cooperating (Penner et al., 2005, p. 366). More specifically, prosocial behaviour refers to actions intended to improve the situation of the person who receives help. It is voluntary and deliberate behaviour that is not driven by professional responsibilities (Bierhoff, 2002). In contrast, altruism is a form of prosocial behaviour that is mainly driven by the desire to benefit others with no expected benefits and usually at a cost to the helper (Aronson et al., 2013). Although prosocial behaviour and altruism are commonly used

interchangeably, they refer to distinct acts. Prosocial behaviour is concerned with the *outcome* of an action, while altruism focuses on the *motivation* underlying the behaviour (Dovidio et al., 2017).

As a form of prosocial behaviour, social mindfulness is also concerned with the *outcome* of an action. It refers to being attentive to others in the present moment by anticipating what their needs and wishes may be before making a decision (Van Lange & Van Doesum, 2015, p. 18). Or to put it differently, socially mindful people take the perspective of the other person into account when making choices (Van Doesum et al., 2013, p. 87). It requires both skill and will to leave the other with control over their outcomes in an interpersonal interaction (Lemmers-Jansen et al., 2018). Having control over outcomes is appreciated by others (Van Doesum et al., 2013; see Aoki et al., 2014) and should, therefore, be seen as a social phenomenon that positively regulates relationships.

Social mindfulness has been described by three main characteristics (Van Doesum et al., 2016). *Firstly*, social mindfulness requires an awareness of others' needs and interests in a given moment. The implication here is that people need to be aware of others' needs and interests to recognise what they may want or need and, thus, to act in a way that leaves them to control their outcomes (Van Lange & Van Doesum, 2015). If people are not aware of others' needs and interests, it is unlikely that they will behave socially mindful unless it occurs purely by chance (Van Lange & Van Doesum, 2015). *Secondly*, unlike other prosocial behaviours such as altruism (i.e., donating money to an organisation supporting people in need, or spending time volunteering), social mindfulness does not necessitate extensive sacrifices (Van Lange &Van Doesum 2015), in that it does not require, for instance, large amounts of money or valuable resources. Putting it differently, social mindfulness is a low-cost prosocial behaviour that only requires a *minimal context* (Van Doesum et al., 2018). Consequently, social mindfulness does not involve weighing the costs against the benefits as

it involves taking into consideration the perspective of the other at the most basic level (Van Doesum et al., 2013). For instance, Engel and Van Lange (2021) showed that social mindfulness was high when costs were low and decreased when costs increased. To put it differently, as far as the costs remain low and do not increase, social mindfulness is sustained (Engel & Van Lange 2021). The low-cost characteristic of social mindfulness is operationalised through the social mindfulness paradigm (SOMi paradigm; Van Doesum et al., 2013). The social mindfulness paradigm measures social mindfulness in the context of having to choose between unique and multiplied low-cost products like apples, glasses, or cups whereby uniqueness is operationalised as a non-functional quality like the colour (Van Doesum et al., 2013). It assesses the likelihood that people make choices that allow others to still have options to choose between these non-functional qualities of products (Van Doesum et al., 2013). *Lastly* and related to the previous characteristic, social mindfulness is mainly focused on relationships and not the material benefits (i.e., who receives *what* in the interdependent situation; Van Doesum et al., 2019). The *outcome* of the situation is what matters as it determines some crucial aspects of interpersonal relationships such as communicating liking or trust.

Apart from these three main characteristics, social mindfulness is *subtle* for both the actor and the receiver. Or to put it differently, people are more likely to be aware of the absence of another's social mindfulness rather than its presence. For instance, when a colleague takes the last blueberry cupcake from a tray that also holds vanilla cupcakes, it can be observed that they are not anticipating the needs and interests of the next person at that moment. The actions of leaving or limiting the choice for the other are subtle ways to communicate either socially mindful or socially *un*mindful intentions (Van Doesum et al., 2016).

Social mindfulness is also *spontaneous* because the needs and preferences of others are taken into account without them being confirmed. To put it differently, people take their own initiative to hold others in mind (Van Doesum et al., 2019). The assumption is that they can see what the other person in the interdependent situation needs and act accordingly without inquiring with those others first (Van Doesum et al., 2013). For instance, a person acts socially mindful when they choose one of the few left lemon pies instead of the last cherry pie in the bakery for the next person to still have a meaningful choice. This shows that the person is mindful of the needs or interests of the other person without asking the other person or being asked.

Social mindfulness is *active* prosociality. Prosociality is distinguished as active and reactive (Van Doesum et al., 2019). Active prosociality is defined by Van Doesum et al. (2019, p. 1) "as foreseeing another person's needs and proactively shaping the intent to benefit them", whereas reactive prosociality is defined "as responding to the changes as they happen". Social mindfulness is active prosociality as it refers to seeing and considering the needs and wishes of others in the present moment before making a decision (Van Doesum et al., 2015). The person who chooses first within the social mindfulness paradigm determines the consequences for the other person. A socially mindful decision indicates that the situation itself is actively defined (Van Doesum et al., 2019). For instance, the other is only left with an option to choose from when one's behaviour (i.e., selecting one of the multiplied instead of the unique object) allows for it. Empirical evidence that making a socially mindful decision is indeed an active choice of being prosocial was provided by Van Doesum et al. (2019, Study 3) who demonstrated that honesty-humility predicted stronger social mindfulness than agreeableness (Van Doesum et al., 2019, Study 3) which corresponded with previous findings that honesty-humility was found to indicate active prosocial behaviour

while agreeableness indicates reactive cooperation (Hilbig et al., 2014). Thus, social mindfulness can be said to be an active way of being prosocial.

Social mindfulness like any prosocial behaviour is *other-oriented* and thus influenced by related prosocial personality traits. A prosocial personality refers to a group of personality traits (e.g., empathy, agreeableness) that contribute to the willingness to act prosocially (Bierhoff, 2002). For instance, people with empathy, which is the ability to understand the feelings of others, act relatively more prosocial (Bierhoff, 2002; Van Doesum et al., 2013). Likewise, prosocial behaviour has been generally associated with personality traits like honesty-humility, agreeableness, and other-orientedness (Penner et al., 2005; Van Doesum et al., 2013). Research has also shown that perspective-taking plays an important role in whether people are socially mindful. For instance, Van Doesum et al. (2013, Studies 1a and 1c) showed that people act more socially mindful when asked to keep the other in mind while making a choice compared to being instructed to keep their personal interests in mind. The effect of personality traits depends, however, upon the strength of the situational demands. For instance, in situations where there are clear and strong indications of how people do (or should) behave (i.e., descriptive and injunctive social norms, respectively) are salient, personality traits will be less significant drivers of prosocial behaviour (Dovidio et al., 2017). However, in situations, where there are weak indications and where social norms about how people are expected to behave are not clear, personality traits will be more important for prosocial behaviour (Penner, 2004; cited from Dovidio et al., 2017).

Besides personality traits, social mindfulness like prosocial behaviour has also been linked to social value orientation (Manesi et al., 2017). Van Lange (1999, p. 337) defines social value orientation as a pattern of outcomes for the self and others which can range from *cooperation* (i.e., maximising outcome for the self and the other), *individualism* (i.e., maximising outcome for the self with little regard for others' outcomes), to *competition* (i.e.,

maximising relative advantage over other's outcomes). For instance, how an individual distributes money between oneself and another person in an economic game can be indicative of their prosocial behaviour. If a person allocates more resources to the other than to oneself, they are considered to be pro*social*, but if they allocate more resources to themselves than to the other, they are considered to be pro*self* (Manesi et al., 2017). Social value orientation is also associated with social mindfulness as evidence implies that people with strong prosocial orientation (i.e., cooperative) compared to those who are individualistically and competitively oriented are more socially mindful as they are more likely to leave the other with an option to choose (Van Doesum et al., 2013).

Perceived *trust* is yet another factor that influences people's social mindfulness as it influences people's prosocial behaviour. Trust is the perception that another person has the best interests of others in mind (Rotenberg, 2010). Past research indicates that people are more likely to be prosocial when the levels of trust are high compared to when levels of trust are low (De Cremer & Stouten, 2003). Even perceiving an unknown person to have a trustworthy face is sufficient to elicit social mindfulness (Van Doesum et al., 2013, Studies 2a and 2b). People who do not trust others are less likely to act prosocially or help others because of the fear of being exploited (Parks et al., 2013). On the other hand, prosocial individuals are more likely to trust that others will reciprocate prosocial behaviour and as a result, they act prosocially toward others (De Cremer & Stouten, 2003). Likewise, perceived trust increases the expectation that a person's social mindfulness will be reciprocated by others in the future, while untrustworthiness enhances the fear that socially mindful behaviour will not be reciprocated and thus lead to the person being exploited (Van Doesum et al., 2013, Studies 2a and 2b). These results do not only imply that being socially mindful is influenced by perceiving the other as trustworthy but also that experiencing social mindfulness influences perceptions of the other as trustworthy.

The actual *presence* of others also influences social mindfulness as it influences prosocial behaviour (Fischer et al., 2011; Fischer & Greitemeyer, 2013). For instance, social mindfulness is stronger in the actual physical presence of the other (Van Doesum et al., 2018). Research demonstrated that the physical presence of a specified confederate who makes a subsequent choice in the social mindfulness task elicits more social mindfulness than when the confederate is unspecified (Van Doesum et al., 2018, Study 1). These results imply that the physical presence of the other is sufficient to elicit greater social mindfulness. A possible explanation for these findings is that the physical presence of the other can make people more aware of how their decisions (e.g., limiting choices for the next person) are going to impact the other person and thus influence the awareness that the other person who chooses next can see whether they are going to be left with an option to choose from (Van Doesum et al., 2018). Thus, people are more likely to show social mindfulness to those who are physically present to avoid the harm of taking away their freedom to choose by taking a multiplied object instead of a unique object (Van Doesum et al., 2018). It is also possible that greater social mindfulness is shown to others who are physically present as a way to encourage liking by others. What is not known yet, is whether social mindfulness is reduced like prosocial behaviour if bystanders are part of the situation (Bierhoff, 2002; Dovidio et al., 2017) or rather increased as being seen as socially mindful might boost one's prestige and reputation in the eyes of the bystanders (Bereczekei et al., 2007).

Social mindfulness is also associated with *cooperation* (Van Lange & Van Doesum, 2015). Cooperation is a kind of prosocial behaviour relevant to social groups and large organisations (Penner et al., 2005). Different from interpersonal helping, cooperation comprises two or more individuals who are mutually dependent and working together to reach a shared goal that is considered valuable by all who are involved (Dovidio et al., 2017). Through cooperation, individuals can reach goals that they would otherwise not achieve

individually (Dovidio et al., 2017). Thus, cooperation necessitates individuals to organise their efforts, which comes usually at some individual expense to accomplish the goal for a common good (Dovidio et al., 2017). Research on social mindfulness showed that socially mindful people are judged more favourably by others which in turn makes them feel inclined to cooperate (Van Doesum et al., 2013, Studies 2a & 2b). Moreover, Dou et al. (2018) found that people increased their cooperative behaviours such as contributing more money or leaving the decision-making to those partners whom they perceived to be socially mindful. These results support the assumption of Van Doesum et al. (2013) that socially mindful actions are often perceived as prosocial gestures to build interpersonal trust and encourage cooperation.

People do, however, not always act socially mindful toward others. Socially *un*mindful behaviour is referred to as social hostility (Van Lange & Van Doesum, 2015). Just as social mindfulness requires small gestures to promote trust and cooperation, it only takes small gestures to signal social hostility. Social hostility can be observed in the social mindfulness paradigm when a person consistently chooses unique objects and as a result limits the choice of their interaction partner (Van Doesum & Van Lange, 2015). For instance, a participant who selects one pink cup among three green cups does not leave a choice for the next person to choose from. Van Doesum et al. (2016, Studies 1 and 2) used the social mindfulness paradigm to identify predictors of social hostility by examining whether people are more socially *un*mindful towards enemies compared to strangers and whether social hostility can be stimulated in a competitive context (e.g., soccer). The results showed that participants were indeed more socially *un*mindful towards enemies. For instance, in a competitive soccer setting, team members were socially mindful toward teammates and socially hostile toward rival team members (Van Doesum et al., 2016). Social mindfulness

and social hostility, therefore, are subtle signals to communicate good or hostile intentions in both interpersonal and intergroup relations (Van Doesum et al. 2016).

Social Mindfulness in Social Context

Like any prosocial behaviour, social mindfulness does not happen in a social vacuum (Tajfel, 1972). Prosocial behaviour has been shown to be affected by factors such as social identity and social status (Penner et al., 2005). For instance, chances are higher of receiving help from ingroup members than from outgroup members (Levine et al., 2005). Likewise, social mindfulness is also more likely to be expressed towards members of ingroups than members of outgroups (Van Doesum et al., 2016). One could argue that people are most likely to show favouritism to those similar to themselves and/or belong to the ingroup (Tajfel & Turner, 1979). The latter is supported by the meta-analysis of Balliet et al. (2014), who concluded that people are more inclined to cooperate with members of their ingroup compared to outgroup members as a way to preserve a desirable social identity with their ingroup, that people cooperate with their ingroup as a means to maintain a positive reputation, and that people cooperate to avoid being excluded from their ingroup. Ingroup members can be friends or people with whom the person shares a social identity. In comparison to ingroup members, outgroup members are more likely to be treated with social hostility. For instance, Van Doesum et al. (2016, Studies 1 and 2) provided evidence by demonstrating that ingroup members were more mindful when interacting with their friends and team members and more socially hostile when interacting with enemies and rival team members.

In addition to being influenced by social identity processes, prosocial behaviour and social mindfulness are affected by people's social status. For instance, research on the effects

of social class on prosocial behaviour found that people from lower social class act more prosocial (i.e., they are more generous, helpful, and trusting) than people from upper social class (Piff et al., 2010; see also Piff et al., 2012). The proposed reason is that people from lower social class have fewer resources and experience more life pressures (i.e., financial instability and poor health) compared to people from upper social class who have access to many resources (i.e., education and material wealth; see Piff et al., 2010). Low social class individuals, therefore, rely more on others to safeguard them during times of need (Piff et al., 2010). Thus, low social class individuals engage in prosocial behaviour as an adaptive strategy to construct and maintain reciprocal relationships (Piff & Robinson 2017, p. 8) while high social class individuals have been found to act prosocially out of concern for their reputation (Piff & Robinson 2017). Thus, individuals from different social classes act prosocially because of different motivations (Piff et al., 2010).

Social mindfulness seemingly not only depends on self-social class but also on *who* the other person (i.e., target) is perceived to be. More specifically, van Doesum et al. (2017, 2021) showed that social mindfulness depends on whether the other is perceived to be either from the low or high social class. To examine the effect of target social class on social mindfulness, Van Doesum et al. (2017, 2021) used the social mindfulness paradigm which is based on leaving or limiting choices for others. These studies were guided by three broad perspectives: the *fairness* explanation, the *social status* explanation, and the *ingroup bias* explanation.

The fairness explanation proposes that low social class targets should elicit greater social mindfulness as a way of rewarding them for their supposed limited resources. This perspective is based on the interdependence theory of Thibaut and Kelly (1978; see Van Lange & Rusbult, 2012). Interdependence theory highlights the importance of social orientations like cooperation and fairness in situations where there is an interdependence on

the outcome (Van Lange & Rusbult, 2012). With regard to interdependence theory, social mindfulness serves to maximise other people's control over their outcomes (Van Doesum et al., 2013). The fairness perspective also proposes that high social class targets elicit social hostility because they have sufficient resources and are therefore independent (Van Doesum et al., 2017). This reasoning is supported by Adams' equity theory (1963, cited from Van Doesum et al., 2013) which proposes the importance of equality and fairness in comparison to others. More specifically, this theory proposes that when people are perceived to have over-benefited (e.g., when they are perceived as privileged), certain measures are taken to restore and maintain equity (Adams, 1963; cited from Van Doesum et al., 2013).

The status explanation, on the other hand, proposes that higher social class targets are likely to be treated with more respect and as a result, they are shown more social mindfulness (Van Doesum et al., 2017). This perspective is based on the reasoning that status is related to social influence due to consensual processes. For instance, research has shown that high-status individuals (whether with or without power) are perceived more positively (i.e., dominant and warm; see Fragale et al., 2011). Likewise, Callaghan et al. (2022) showed that signs of high social class compared to signs of low social class result in greater prosocial behaviour. For instance, people donated more money to help homeless people when asked by a high-status individual (i.e., who is wearing a business suit) than when asked by a low-status individual (i.e., who is wearing jeans and a t-shirt; see Callaghan et al., 2022).

Lastly, the ingroup bias (i.e., similarity) explanation proposes that people should show more social mindfulness to others who belong to their own social class (i.e., ingroup). The ingroup bias perspective is built on the social identity theory of Tajfel and Turner (1979). This approach assumes that ingroup favouritism is driven by the need to achieve and maintain a desirable self-concept by ensuring that the ingroup is perceived to be positively distinct from the outgroup (Tajfel & Turner 1979). For instance, people are usually more inclined to

act prosocially when their choices have an impact on the outcome of their ingroup members rather than the outgroup members (Balliet et al., 2014). In their experiments, Fiedler et al. (2018) found a high level of ingroup bias in that people treated those who belonged to their nations (i.e., ingroup) more prosocially relative to those who belonged to other nations (i.e., outgroup).

Various studies tested the three explanations by examining both the effect of the targets' social class and the effect of self-social class on social mindfulness (Van Doesum et al., 2017; 2021). Overall, the results revealed repeatedly that only the targets' social class but not the self-social class of participants nor the interaction between the targets' social class and self-social class is related to social mindfulness (Van Doesum et al., 2017, 2021). More specifically, it has been repeatedly demonstrated that targets from low social class elicited relatively more social mindfulness when compared to targets from high social class (Van Doesum et al., 2017, 2021). However, the findings also suggest that social mindfulness is rather reduced toward high social class targets than heightened toward low social class targets as social mindfulness did not differ in participants exposed to low social class targets or the control condition (i.e., no specific information about the target, Van Doesum et al., 2017, 2021). Thus, the findings imply that participants might be by default socially mindful which does not necessarily contradict the fairness explanation. The latter is qualified by recent findings showing that the effects of the targets' social class on social mindfulness were driven by target evaluations. More specifically, the authors showed that compassion for (Studies 2 & 3) and perceived deservingness of the low social class target (Study 3) mediated the relationship between the social class of the target and social mindfulness (see Van Doesum et al., 2021).

Replicating the experiments of Van Doesum et al. (2017, 2021) that assessed the effects of target social class and self-social class on social mindfulness, we explored whether

self-social class and the targets' social class influence social mindfulness within a non-WEIRD-context; namely South Africa. More specifically and in line with the three previously proposed explanations, we proposed:

Hypothesis 1a: To confirm the fairness explanation, it is hypothesised that low social class targets elicit stronger social mindfulness than high social class targets.

Hypothesis 1b: To confirm the status explanation, it is hypothesised that high social class targets elicit stronger social mindfulness than low social class targets.

Hypothesis 1c: To confirm the ingroup bias explanation, it is hypothesised that high social class targets elicit stronger social mindfulness in participants from high social class and that low social class targets elicit stronger social mindfulness in participants from low social class.

Previous studies revealed that the self-social class of participants did not have any influence on their social mindfulness (Van Doesum et al., 2017, Studies 1-3; 2021, Studies 1-3). The authors did not provide possible explanations for these findings (Van Doesum et al., 2017, 2021). Thus, the question arises why self-social class does not influence participants' social mindfulness, even though research on social class would suggest otherwise. Before disregarding self-social class as an influential factor, it is important to rule out any methodological limitations of previous studies that might have contributed to the absence of self-social class effects on social mindfulness. For example, one could argue that the procedure of previous studies might have prevented self-social class to be salient in participants when responding to the social mindfulness paradigm measure. Commonly, participants' self-social class was assessed before the measures of social value orientation, frequency of volunteering, personality dimensions honesty-humility, and agreeableness (Van

Doesum et al., 2017, see Studies 1 to 4; 2021, see Studies 1 and 2) which might have contributed that self-social class was not in people's minds when answering the social mindfulness paradigm measure. To exclude the possibility that the order in which the measurements were presented to participants in the studies by Van Doesum et al. (2017; 2021) influenced the self-social class effects on social mindfulness (or the lack of it), we controlled in our studies for possible order effects of the measurements assessing social class and prosocial orientations. More specifically, we propose that the social class of participants will only be effective if it is psychologically salient at the time that participants complete the social mindfulness paradigm measure. We, therefore, proposed that:

Hypothesis 2: Self-social class of participants is related to social mindfulness under the condition that it is psychologically salient.

The proposed hypotheses were tested in two separate studies. Study 1 (N = 266) and Study 2 (N = 448) applied a similar procedure as Van Doesum et al. (2017), in that participants were provided with self-social class measures and measures on prosocial orientations (e.g., social value orientation and personality traits) before they were asked to respond to the social mindfulness paradigm measure (Van Doesum et al., 2017). However, different from the Van Doesum et al. (2017) studies, the present studies controlled for the possibility of an order effect of self-social class measures and measures on prosocial orientations that might influence the self-social class effects on social mindfulness. More specifically, different from the Van Doesum et al. (2017) studies, self-social class was presented to participants in Study 1 after the prosocial orientation measures were assessed (i.e., social value orientation and personality dimensions of honesty-humility, agreeableness, altruism). In Study 2, the order of self-social class measures and prosocial orientation measures was counter-balanced. Secondly, although we included the social value orientation

measure across the two studies, this did not apply to the measures assessing the personality dimensions of honesty-humility, agreeableness and altruism which were only assessed in Study 1 but not in Study 2.

Both studies were conducted online with psychology students from a South African University using the research platform *Qualtrics*. It is important to note that although we used the same population of psychology students in these two studies, the samples of the two studies were independent. Before conducting the studies, permissions to conduct the two studies were granted by the Ethical Research Committee at the College of Human Sciences of the South African University (CREC Ref. no: 2020-CHS-51069733) and the Research Permission Sub-Committee of the Senate Research, Innovation, and Postgraduate Degrees and Commercialisation Committee (Ref. no: 2021_RPSC_15).

Study 1

The overall aim of Study 1 was to test the effects of the targets' social class and the effects of self-social class on social mindfulness. More specifically, Study 1 tested the three alternative hypotheses that low social class targets elicit stronger social mindfulness than high social class targets (Hypothesis 1a), that high social class targets elicit stronger social mindfulness than low social class targets (Hypothesis 1b), or that high social class targets elicit stronger social mindfulness in participants from high social class and that low social class targets elicit stronger social mindfulness in participants from low social class (Hypothesis 1c). Moreover, we explored whether self-social class of participants is related to social mindfulness under the condition that it is psychologically salient (Hypothesis 2). Study 1 applied a one-factor between-subjects design using three levels. The factor *target's social class* was manipulated as a high social class target, a low social class target, and a control condition (i.e., no information about the target's social class was provided). Participants were randomly allocated to one of these three experimental conditions. Social mindfulness as the dependent variable was assessed using the social mindfulness paradigm measure (Van Doesum et al., 2013). The factor *self-social class* was measured as both objective and subjective social class in Study 1.

Participants

Participants were undergraduate psychology students from a South African University. The required sample size for Study 1 was estimated using the G*Power (Faul et al., 2007). Assuming an alpha level of .05, an effect size of .25 and a priori statistical power of .95, the minimal sample size to test the statistical model using F-statistics was 251. In total, 10714 students were invited to participate in Study 1, of which 504 started the study (i.e., a 4.7% response rate). Of these 504 participants, 266 answered the dependent variable. Therefore, the sample on which further analyses are based consisted of 266 participants.

These participants were on average 30.06 years old (*SD* = 9.03) ranging from 18 to 59 years. One hundred and ninety-eight participants reported being females (n = 43 males and two selected the option of other). The majority of participants identified themselves as Black South Africans (n= 157), followed by 54 White South Africans, 19 Indian/Asian South Africans, and 10 Coloured South Africans. Two participants selected the option of "other", while 24 participants did not report their ethnicity.

Procedure

Potential participants received an email invitation to take part in the study including the link to the online study. On the landing page, participants were informed that the study aimed at extending our understanding of social and psychological factors that influence people's social interactions. Participants were asked to answer the questions and statements provided to them as honestly as possible, and they were informed that completion of the study should take approximately 30 minutes. They were further informed that participation was voluntary and that they could withdraw from the study at any stage without any consequences. Anonymity was assured and participants were further informed that the results of the study would be analysed at the group level. After reading the information about the study, participants were requested to consent (or not consent) to participate by clicking on the respective button (Annexure 1a). Participants who gave consent to participate in the study proceeded to the experiment and those who did not consent were thanked (Annexure 1b).

Participants in Study 1 received first the social value orientation, honesty-humility, agreeableness, and altruism measures followed by the objective social class and subjective social class measures. After responding to the social class measures, participants were asked to "take a minute to think about the social class that you belong to and respond to the following questions". Participants were first asked to "Please list up to three things that you and people in your social class rarely do"; "Please list up to three things that you and people

in your social class do relatively well", and "Please list up to three things that you and people in your social class generally do badly". After participants responded to these three questions, which served to increase the salience of social class in the participants, they were provided with the social class identification measure.

Participants were then randomly allocated to one of the three target social class conditions: high social class *versus* low social class *versus* control, and provided with the following instruction:

> The next task involves two people: you and someone else. Imagine that the other person is someone you have not met before and someone you will not knowingly meet again in the future. Imagine also that you both get to choose one of the objects that we will show you in a minute. There are only a few objects left. Once taken, these objects will not be replaced. The computer has decided that you always get to choose first. So, to summarise: You and someone else can each choose one among the objects shown on the screen. It is important to remember that you choose first and that the object you chose will not be replaced.

They were further presented with an example of the social mindfulness (SOMi) paradigm measure:

After this introduction, participants were informed that "Before you start with the task, you will receive some information about your interaction partner who will choose an object after you have made your choice" and were presented either with information about the target of the interaction as high social class target [or as low social class target]. The presented information stated:

> Your interaction partner is Thabiso. He is in his mid-30s, 1.75m tall, weighs about 85kg, and has short hair and brown eyes. Thabiso is a graduate from one of the prestigious universities in South Africa [has matric but never attended university]. He currently works as a CEO of his own company and earns more than R 50000 a month [works odd jobs and earns less than R 2000 a month]. He lives in Sandton and drives a brand-new BMW [in Alexandria and uses public transport].

In the control condition, participants received only the name of the interaction partner and the physical description: "Your interaction partner is Thabiso. He is in his mid-30s, 1.75m tall, weighs about 85kg, and has short hair and brown eyes."

After reading the information about the interaction partner, participants were asked to answer the social mindfulness paradigm measure as a dependent variable. After the assessment of the dependent variable, participants were presented with the measures of the manipulation check and demographics. This was followed by a debriefing message which informed participants that the focus of the research was to study whether the information that they received about the other person (i.e., interaction partner) influenced their responses. Participants were further informed that the experimental approach was used in the present study, which means that different participants received different information about the person

who would choose from the objects after the participants as we aimed to establish whether individuals behave pro-socially or not (Annexure 1b).

Measurements

Social value orientation was assessed using the SVO-slider (Murphy et al., 2011) which measures the extent to which individuals are pro*self* as opposed to pro*social*. Participants were provided with the following instruction: In this task, you have been randomly paired with another person whom we refer to as the "other." This other person is someone you do not know, and you are unlikely to meet in the future. You will be making decisions about allocating resources between you and the other. All of your choices are confidential. For each of the following please indicate the distribution you prefer most by selecting the payoff allocations." In total, participants were provided with six matrices in a fixed order (see Murphy et al., 2011, p. 772). The final score for *social value orientation* was calculated as a degree following the procedure by Murphy et al. (2011). The degrees ranged from less than -7.82^{o} (i.e., competitive types and individualists) to more than 60.54^{o} (i.e., prosocials and altruists) (see Murphy et al., 2011, p. 773).

The personality dimensions of *honesty-humility*, *agreeableness,* and *altruism* were assessed using the Hexaco-PI-R-100 (Ashton et al., 2014). The dimensions of honesty-humility (16 items like "I rarely feel anger, even when people treat me quite badly"), agreeableness (16 items like "Having a lot of money is not especially important to me"), and altruism (4 items like "I try to give generously to those in need") were assessed using in total 36 relevant items (Ashton et al., 2014). For this measure, participants were provided with statements and asked to indicate on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) to what degree these statements describe them. The measures of honesty-humility and agreeableness had appropriate Cronbach's alpha of .75 and .80,

respectively. The internal reliability of the altruism scale was rather poor (α = .52). Thus, altruism was not considered in the further analysis.

Social class was assessed as both objective and subjective social class. *Objective social class* was measured as household income and parental education. Thus, participants were asked to indicate their monthly household income ranging between 1 (below R 2000), 2 (between R 2000 and R 4999), 3 (between R 5000 and R 9999), 4 (between R 10000 and R 19999), 5 (between R 20000 and R 29999), 6 (between R 30000 and R 49999) and 7 (more than R 50000). Moreover, participants were asked to indicate the educational level of their mothers and fathers ranging from 1 (no schooling), 2 (matric), 3 (Diploma), 4 (Technical Degree), 5 (Bachelor's Degree), 6 (Master's Degree), to 7 (Doctorate). Participants had the option to also indicate that the question is not applicable (e.g., no male [female] parent/guardian). These three variables were combined into an objective social class measure (α = .64).

Subjective social class was measured using the MacArthur scale of subjective social status (Adler et al., 2000). Participants were shown a picture of a ladder and provided with the following instruction: "Please think of the ladder below as a representation of where people stand in South Africa in terms of income, education, and occupation. The people at the top of the ladder represent those who are the best off while those at the bottom represent those who are the worst off. Where would you place yourself relative to the people who are the best off and those who are the worst off in terms of income, education and occupation on the ladder?" Participants were asked to position themselves using three sliders (i.e., income, education, and occupation) that ranged from 1 (*worst position*) to 10 (*best position*). The responses were rated based on where participants placed themselves on the ladder relative to those who are the worst off (1) and those who are the best off (10). A subjective social class measure was created from these three variables (α = .82).

Ingroup Identification with social class was measured using six selected items from the 14-item scale of Leach et al. (2008) that participants were asked to respond to using a five-point Likert scale ranging from 1 (*strongly disagree*) and 5 (*strongly agree*). The following items were used: "I feel a bond with my social class", "I feel committed to my social class", "The fact that I am a member of my social class is an important part of my identity", "I feel good about being a member of my social class", "I have a lot in common with an average member of my social class", and "Members of my social class have a lot in common with each other" ($\alpha = .85$).

Social mindfulness was assessed using the social mindfulness paradigm measure (Van Doesum et al., 2013) with 24 trials (i.e., 12 experimental and 12 control trials). Some experimental trials consisted of one unique object and two identical objects (e.g., one yellow umbrella and two blue umbrellas) while others consisted of one unique object and three identical objects (e.g., one red mug and three green mugs). Control trials presented two by two identical objects (i.e., four identical objects) or three identical objects. All trials were presented horizontally on a screen in random order. Based on the choices in the 12 experimental trials, a socially mindful choice (i.e., non-unique item) was scored as 1 and a socially unmindful choice (i.e., unique item) was scored as 0. The maximum score was 12 while the minimum score was 0. The final score was calculated as the average of socially mindful choices across all experimental trials (i.e., the average could range from 0 to 1).

As a *manipulation check measure*, participants were asked to place the "target" they interacted with on the same MacArthur scale as used to assess their subjective social class. They received the following instruction: "Please place your interaction partner Thabiso on the same ladder as you used to report your own subjective socio-economic status. Move the slider to the step (ranging from 1 to 10) on which you would position your interaction partner Thabiso with regard to income, education, and occupation". The responses were rated based

on where participants placed the interaction partner on the ladder relative to those who are the worst off (1) and those who are the best off (10). Based on these three variables, the manipulation check measure was created ($\alpha = .93$).

Lastly, participants were asked to indicate their *age*, *gender*, and *ethnicity*.

Results

Preliminary analyses

In the first step, we assessed whether participants had different social class targets in their minds when responding to the dependent variable *social mindfulness*. Participants, who were randomly allocated to the high social class target condition, ($M = 7.10$, $SD = 2.48$, $n = 80$) estimated the target's social class position as relatively higher than participants in the control condition ($M = 5.49$, $SD = 1.76$, $n = 81$), while both participants in the high social class target condition and control condition estimated the target's social class position as relatively higher than participants in the low social class target condition ($M = 3.42$, $SD = 1.77$, $n = 82$). The group differences were statistically significant, $F(2, 240) = 66.93$, $p < .001$, $\eta^2 = .36$, and the Games-Howell post hoc statistic implied that all three groups differed significantly from each other ($p_s < .001$). These results imply that the manipulation of the target's social class was successful in Study 1.

Table 1 reports the overall means, standard deviations, and intercorrelations of the principal variables. The means, standard deviations, and intercorrelations for the three target conditions are reported in the Supplementary (Tables S1 to S3). The overall results of the intercorrelations of the principal variables show that social mindfulness was significantly positively correlated with social value orientation, objective social class, and subjective social class. However, honesty-humility, agreeability, and ingroup identification did not correlate with social mindfulness. These results are consistent with the findings of Van Doesum et al.

(2021, p. 6) which showed a positive relationship between social value orientation and social mindfulness.

Table 1

Overall means, standard deviations, and intercorrelations of the principal variables (N = 266), Study 1

	1	2	3	4	5	6	7
M	28.96	3.72	3.21	2.62	4.43	3.43	0.61
SD	11.23	0.55	0.48	1.15	1.89	0.88	0.23
Min	-7.82	2.38	1.75	1	1	1	0
Max	60.54	5.00	4.75	6	10	5	1
1. SVO	-						
2. Honesty-humility	.06	-					
3. Agreeability	-.03	.32***	-				
4. Objective SC	.09*	.11	-.16*	-			
5. Subjective SC	-.03	-.04	-.08	.31***	-		
6. Ingroup Id	-.23**	.06	.19**	-.18**	.07	-	
7. SOMi	.17*	.01	-.09	.22***	.15*	-.06	-

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; SVO = Social Value Orientation; SC = Social Class; Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

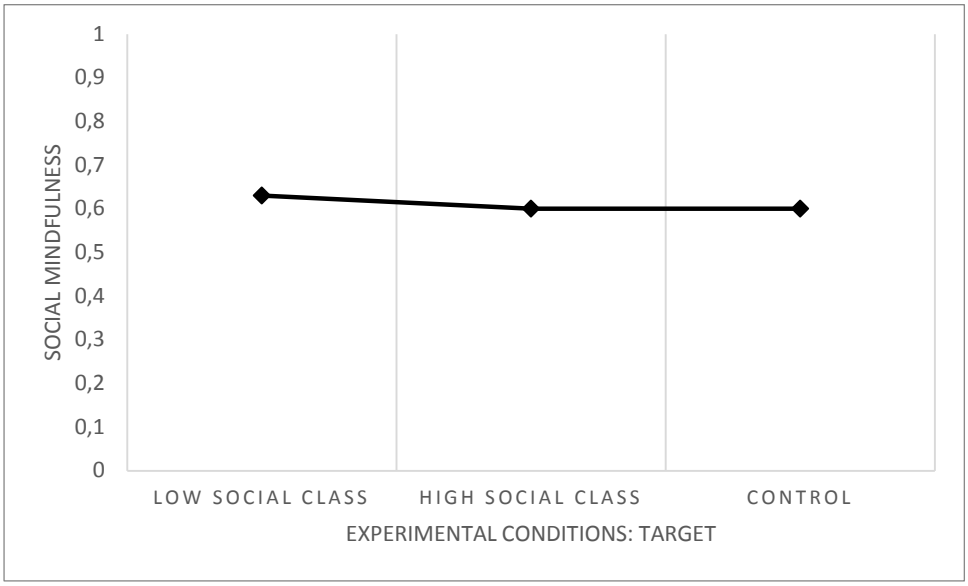
Hypothesis testing

Firstly, we assessed the targets' social class effect on social mindfulness while controlling for social value orientation, honesty-humility, agreeability, and objective and subjective social class using the General Linear Models approach. Thus, we entered experimental conditions as the independent variable, social mindfulness as the dependent variable, social value orientation, honesty-humility, agreeability, subjective and objective social class, and identification with social class as covariates[1]. The results revealed that different to the findings of Van Doesum et al. (2017, 2021), targets' social class did not affect social mindfulness, $F(2, 257) = 0.55$, $p = .581$, $\eta_p^2 = .004$. Although participants in the low social class target condition ($M = 0.63$, $SE = 0.02$) scored slightly higher on social mindfulness, they did not differ statistically significantly from participants in the high social class target condition ($M = 0.60$, $SE = 0.02$) and in the control condition ($M = 0.60$, $SE = 0.02$) (see Figure 1). Only social value orientation, $F(1, 257) = 5.78$, $p = .017$, $\eta_p^2 = .022$, and objective self-social class, $F(1, 257) = 5.95$, $p = .015$, $\eta_p^2 = .023$, had a main effect on social mindfulness, but not honesty-humility, $F(1, 257) = 0.004$, $p = .947$, $\eta_p^2 = .000$, agreeability, $F(1, 257) = 0.31$, $p = .579$, $\eta_p^2 = .001$, identification with social class, $F(1, 257) = 0.773$, $p = .380$, $\eta_p^2 = .003$, and subjective self-social class, $F(1, 257) = 2.591$, $p = .109$, $\eta_p^2 = .010$. Consequently, the present results do not support any of the three alternative hypotheses stating that low social class targets elicit stronger social mindfulness than high social class targets (Hypothesis 1a), that high social class targets elicit stronger social mindfulness than low social class targets (Hypothesis 1b), or that high social class targets elicit stronger social mindfulness in participants from high social class and that low social class targets elicit stronger social mindfulness in participants from low social class (Hypothesis 1c).

[1] In a previous analysis, we estimated the F-statistic without including the covariates. The model was not signitificant, $F(2, 263) = 0.183$ $p > .05$, which implies that the targets' social class did not affect social mindfulness.

Figure 1

Estimated Marginal Means of social mindfulness per experimental condition, Study 1



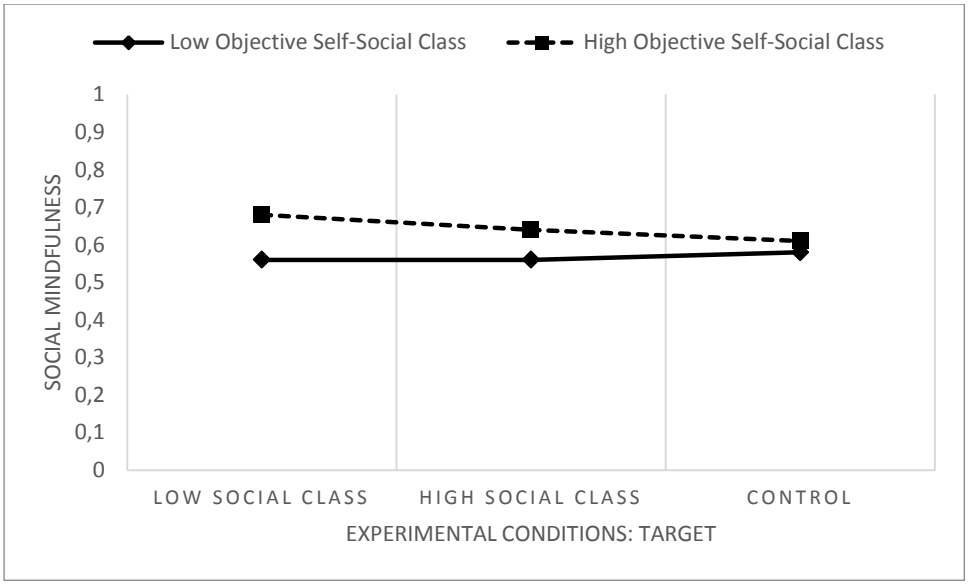
In a second step of the analysis, we created a two-group variable for the objective self-social class using a median split (Med(X) = 2.33) which would allow testing for the interaction effect between the target's social class and objective self-social class on social mindfulness. We entered experimental conditions and the group variable of objective self-social class as independent variables, social mindfulness as a dependent variable, and social value orientation, honesty-humility, agreeability, subjective self-social class, and identification with social class as covariates into the General Linear Model. The results revealed again that the target's social class did not affect participants' social mindfulness, $F(2, 235) = 0.26$, $p = .771$, $\eta_p^2 = .002$. However, objective self-social class affected participants' social mindfulness, $F(1, 235) = 6.933$, $p = .009$, $\eta_p^2 = .029$, in that participants from the lower objective self-social class group reported on average lower social mindfulness ($M = 0.57$, $SE = 0.02$) than participants from the higher objective self-social class group ($M = 0.65$, $SE = 0.02$). However, the interaction term between the targets' social class and the

objective self-social class was not statistically significant, $F(2, 235) = 0.719$, $p = .488$, $\eta_p^2 = .006$ (see Figure 2). Only social value orientation still had a significant main effect on social mindfulness, $F(1, 235) = 5.78$, $p = .017$, $\eta_p^2 = .022$; whereas honesty-humility, $F(1, 257) = 0.071$, $p = .791$, $\eta_p^2 = .000$, agreeability, $F(1, 235) = 0.314$, $p = .576$, $\eta_p^2 = .001$, subjective self-social class, $F(1, 235) = 2.362$, $p = .126$, $\eta_p^2 = .010$, and identification with social class, $F(1, 235) = 0.301$, $p = .584$, $\eta_p^2 = .001$, did not affect social mindfulness.

Different from the studies conducted by Van Doesum et al. (2017, 2021), the factor of objective self-social class influenced the social mindfulness of participants in the current sample. This effect might be the result that the present study changed the order of the social class assessment relative to the Van Doesum et al. (2017, 2021) studies and increased the salience of social class by asking participants to think about this social category. Thus, the results of Study 1 provide some evidence that self-social class of participants is related to social mindfulness under the condition that it is psychologically salient (Hypothesis 2).

Figure 2

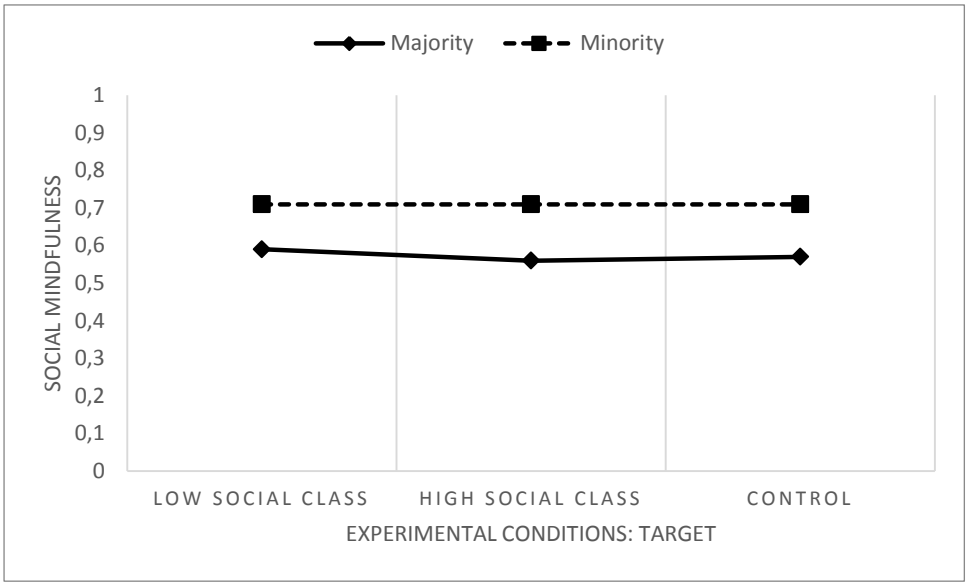
Estimated Marginal Means of social mindfulness per experimental condition and objective self-social class of participants, Study 1



In a third step of the analysis, we aimed at considering the *particular* socio-economic context of South Africa by introducing the factor of the majority or minority groups. Different from the countries where previous studies have been conducted, South Africa is one of the most unequal countries where the majority group (i.e., Black South Africans) is still largely denied economic opportunities when compared to the minority groups (i.e., White, Indian, and Coloured South Africans). These economic differences express themselves when comparing the majority and minority groups in the current study concerning their objective self-social class, $M_{maj} = 2.32$, $SD_{maj} = 1.13$, n = 157, and $M_{min} = 3.27$, $SD_{min} = 0.99$, n = 85, $F(1, 240) = 42.46$, $p < .001$, $\eta^2 = .15$; and subjective self-social class, $M_{maj} = 4.19$, $SD_{maj} = 1.86$, n = 157, and $M_{min} = 5.21$, $SD_{min} = 1.74$, n = 85, $F(1, 240) = 17.45$, $p < .001$, $\eta^2 = .068$. Consequently, we applied the General Linear Models approach again and entered experimental conditions and majority versus minority groups as independent variables, social mindfulness as the dependent variable, and social value orientation, honesty-humility, agreeability, and identification with social class as covariates. The results revealed again that the target's social class did not affect participants' social mindfulness, $F(2, 232) = 0.10$, $p = .907$, $\eta_p^2 = .001$. However, participants' majority versus minority group membership affected their social mindfulness, $F(1, 232) = 20.77$, $p < .001$, $\eta_p^2 = .082$, in that participants from the majority group reported significantly lower social mindfulness ($M = 0.57$, $SE = 0.02$) than participants from the minority groups ($M = 0.71$, $SE = 0.02$). However, the interaction between the target's social class and participants' majority versus minority group membership did not affect participants' social mindfulness, $F(2, 232) = 0.115$, $p = .892$, $\eta_p^2 = .001$ (see Figure 3). Like in the previous analyses, only social value orientation, $F(1,232) = 4.27$, $p = .04$, $\eta_p^2 = .018$, had an effect on social mindfulness but not honesty-humility, $F(1, 232) = 0.245$, $p = .621$, $\eta_p^2 = .001$, agreeability, $F(1, 232) = 0.016$, $p = .898$, $\eta_p^2 = .000$, and identification with social class, $F(1, 232) = 0.068$, $p = .795$, $\eta_p^2 = .000$.

Figure 3

Estimated Marginal Means of social mindfulness per experimental condition and majority and minority membership of participants, Study 1

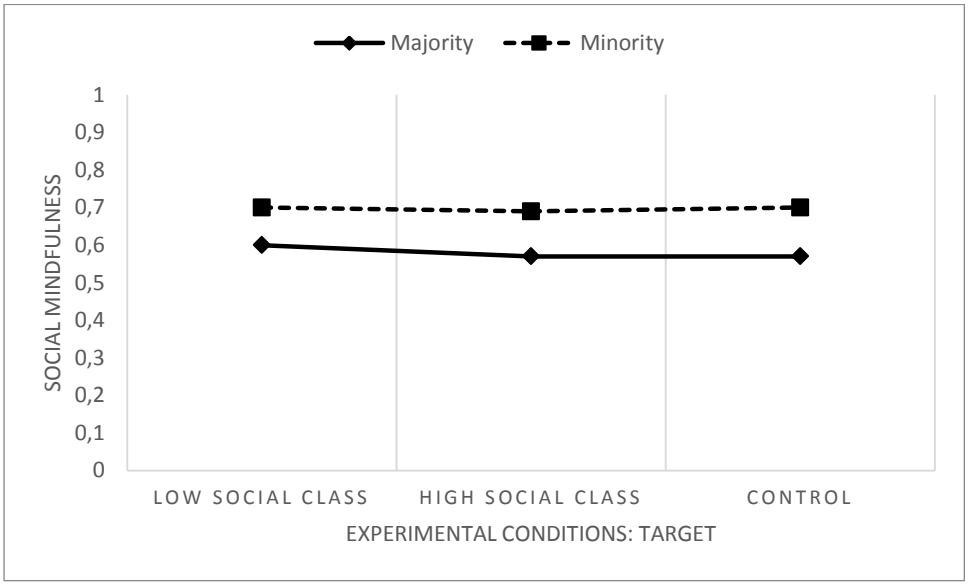


Assuming that majority and minority groups are not only defined (and do not define themselves) by their socio-economic status, we repeated the previous analysis but controlled for the objective and subjective self-social class as additional covariates. The results remained the same in that the targets' social class did not affect participants' social mindfulness, $F(2, 230) = 0.17$, $p = .841$, $\eta_p^2 = .002$. More importantly, the effect of participants' majority versus minority group membership on their social mindfulness remained statistically significant, $F(1, 230) = 12.54$, $p < .001$, $\eta_p^2 = .052$, in that participants from the majority group reported significantly lower social mindfulness ($M = 0.58$, $SE = 0.02$) than participants from the minority groups ($M = 0.69$, $SE = 0.03$). Again, the interaction between the targets' social class and participants' majority versus minority group membership did not affect participants' social mindfulness, $F(2, 230) = 0.143$, $p = .867$, $\eta_p^2 = .001$ (see Figure 4). When controlling for both objective and subjective self-social class, the

effect size of the majority versus minority group membership effect on social mindfulness decreased from a partial eta squared of .082 to .052. However, the effect remained statistically significant and the effect size remained medium in size which implies that the effect of majority and minority group membership on social mindfulness goes beyond objective or subjective economic resources. Like in the previous analysis, only social value orientation did affect social mindfulness, $F(1, 232) = 4.19$, $p = .042$, $\eta_p^2 = .018$, but not honesty-humility, $F(1, 230) = 0.352$, $p = .553$, $\eta_p^2 = .002$, agreeability, $F(1, 230) = 0.120$, $p = .730$, $\eta_p^2 = .000$, identification with social class, $F(1, 230) = 0.052$, $p = .821$, $\eta_p^2 = .000$, objective self-social class, $F(1, 230) = 2.150$, $p = .144$, $\eta_p^2 = .009$, and subjective self-social class, $F(1, 230) = 0.502$, $p = .479$, $\eta_p^2 = .002$.

Figure 4

Estimated Marginal Means of social mindfulness per experimental condition and majority and minority membership of participants while controlling for objective self-social class, Study 1



Discussion

The aim of Study 1 was to test whether target social class and self-social class influence social mindfulness. More specifically, we tested three alternative hypotheses which proposed that either low social class targets elicit stronger social mindfulness than high social class targets (Hypothesis 1a), or that high social class targets elicit stronger social mindfulness than low social class targets (Hypothesis 1b), or that high social class targets elicit stronger social mindfulness in participants from high social class and that low social class targets elicit stronger social mindfulness in participants from low social class (Hypothesis 1c). The results suggest that the target's social class does not influence social mindfulness in Study 1. These findings are inconsistent with the findings of Van Doesum et al. (2017, 2021) who repeatedly found that low social class targets were treated with greater social mindfulness than high social class targets. Consistent with previous research, social value orientation was associated with social mindfulness (Van Doesum et al., 2013, 2021). Both personality factors (i.e., honesty-humility and agreeability) and identification with social class were not correlated with social mindfulness. In contrast, objective self-social class affected social mindfulness in the present study.

Consequently, the results of Study 1 did not provide empirical support for either the fairness (Hypothesis 1a), status (Hypothesis 1b), or similarity (Hypothesis 1c) explanations proposed by Van Doesum et al. (2017). Firstly, the fairness explanation failed as low social class targets did not elicit greater social mindfulness than high social class targets. Secondly, high social class targets were not treated with more social mindfulness than low social class targets. Therefore, the status explanation was not supported either. Thirdly, participants were not more socially mindful toward targets who belonged to their own social class (i.e., ingroup) which does not support the similarity explanation. Different from the findings by Van Doesum et al. (2017, 2021), the objective social class of participants influenced social

mindfulness, in that participants who perceive themselves as belonging to the high social class showed significantly more social mindfulness than participants who perceive themselves as belonging to the low social class. The effect of objective social class was independent of the target's social class.

A possible explanation for our findings showing that the target social class did not affect social mindfulness could be that due to the high levels of economic inequality in South Africa (World Bank, 2019), participants might in general be less concerned about others' needs and interests. This possible explanation is supported by the average score of social mindfulness of our participants (see Table 1) which is similar to a sample of South African participants in a previous global study, and which implied that the South African sample was among those who scored relatively low on social mindfulness when compared to samples from other nations (Van Doesum et al., 2021). Similar to the South African sample, the samples from countries such as Indonesia and India scored equally low on social mindfulness (Van Doesum et al., 2021). Like South Africa, these two countries are low-income countries with high social and economic inequality levels (World Bank, 2019). That economic inequality is related to lower prosocial behaviour and also to lower levels of cooperation has been shown in previous research (Cote` et al., 2015, Nishi et al., 2015).

Our results concerning the role of self-social class on social mindfulness suggest that the objective self-social class but not the subjective self-social class of participants affects social mindfulness. Participants who perceived themselves as objectively belonging to the low social class showed significantly less social mindfulness compared to participants who perceived themselves objectively as belonging to the high social class. These results are also inconsistent with the findings of Van Doesum et al. (2017, 2021) which consistently suggested no influence of self-social class on social mindfulness. Moreover, our results contradict previous findings that high social class individuals are less prosocial than low

social class individuals (Piff et al., 2010, 2012, Piff & Robinson, 2017), which, however, have beencalled recently into question by Jung et al. (2023) as they could not be replicated. The results of our study provide the first evidence in support of Hypothesis 2 which stated that the self-social class of participants is related to social mindfulness under the condition that it is psychologically salient in a given situation. Thus, making social class psychologically salient seemingly influences participants' social mindfulness. However, to be certain that the psychological salience of social class determined the objective social class effect on social mindfulness requires not only replicating the pattern but also controlling for it. In Study 2, we applied, therefore, a research design through which we manipulated the psychological salience of social class by counter-balancing the order of self-social class measures and prosocial orientation measures.

Unlike the findings of Van Doesum et al. (2013), personality traits like honesty-humility and agreeability did not play a role in social mindfulness. Past studies have indicated that people express personality traits depending on the characteristics of the situation (Thielmann et al., 2020), for instance, whether there is an opportunity to exploit others (i.e., if one can increase their outcomes at the expense of others) or whether there is a chance for reciprocity (i.e., if others are likely to return the prosocial behaviour). Identification with social class did not play a role in social mindfulness either. Even though participants' average identification with the social class was above the scale midpoint and independent of the experimental conditions, the scores were rather moderate. Social value orientation had a positive effect on social mindfulness which is consistent with previous findings (Van Doesum et al., 2013; 2021).

Taking the social and economic context of South Africa into consideration, which differs from those contexts where previous research on social mindfulness was conducted, the present results showed that participants belonging to the majority group (i.e., Black South

Africans), which is relatively socially and economically disadvantaged, were less socially mindful than participants from the minority groups (i.e, White, Indian and Coloured South Africans), which are relatively socially and economically advantaged. This effect was independent of the target's social class and it held even when self-social class was controlled for. These findings suggest that the target social class effects on social mindfulness might hold in WEIRD but not necessarily in non-WEIRD contexts. However, to be certain that the found effect is genuine, it is necessary to replicate the pattern in an independent second study.

Study 2

The aim of Study 2 was to re-test the effects of the targets' social class and the effects of self-social class on social mindfulness. Different from Study 1, Study 2 controlled for a possible order effect of the social class measures. Consequently, Study 2 applied a 2 (order of social class measure: before pro-social orientation measures *versus* after pro-social orientation measures) x 3 (target social class: high *versus* low *versus* control) factorial between-subjects design. Like in Study 1 and the studies of Van Doesum et al. (2017, 2021), social mindfulness was assessed using the social mindfulness paradigm measure. Like in Study 1, the factor *self-social class* was measured as both objective and subjective social class.

Participants

Participants were again undergraduate psychology students from the same South African University. The required sample size was again estimated using G*Power (Faul et al., 2007). Assuming an alpha level of .05, an effect size of .25 and a priori statistical power of .95, the minimal sample size to test the statistical model using F-statistic was 323. In total, 14042 students were invited to participate in the study, of which 624 started the study (4.4 % response rate). It is important to note that participants of Study 2 were neither invited nor participated in Study 1. Of these 624 participants, 448 answered the dependent variable. Therefore, the sample on which further analyses were based consisted of 448 participants. These participants were on average 28.78 years old (*SD*= 8.22) ranging from 18 to 70 years. Three hundred and forty-three participants reported being females (n = 64 males, and 5 selected the option of other). Most participants identified themselves as Black South Africans (n= 269), followed by 84 White South Africans, 25 Indian/Asian South Africans, and 29 Coloured South Africans (5 selected the option of other).

Procedure and Measurement

Participants received the same information about the study and the request to provide consent as in Study 1 (see Annexure 2a). Participants who did not consent were thanked and debriefed (see Annexure 2b). Different to Study 1, participants in Study 2 were randomly allocated to the counter-balanced order of the social class measurement: either before the social value orientation measure or after the social value orientation measure. Also different from Study 1, Study 2 assessed only social value orientation but not the personality dimensions of honesty-humility, agreeableness and altruism as they did not reveal any effects in Study 1. Social value orientation, and objective ($\alpha = .71$) and subjective ($\alpha = .84$) self-social class were assessed as in Study 1. Like in Study 1, the final score for *social value orientation* in Study 2 was calculated as a degree following the procedure by Murphy et al. (2011). The degrees ranged from -16.26^{o} (i.e., competitive types and individualists) to 61.39^{o} (i.e., prosocials and altruists) (see Murphy et al., 2011, p. 773).

After participants responded to the social value orientation and self-social class measures, they were randomly allocated to one of the different target social class conditions: high *versus* low *versus* control. They received the same information concerning the target and the same information concerning the social mindfulness paradigm measure as in Study 1. After participants responded to the social mindfulness measure, they were asked to complete the manipulation check measures ($\alpha= .92$) and the identification with social class measure ($\alpha= .81$) which were again the same measures as in Study 1. Lastly, participants were asked to indicate their age, gender, and ethnicity. After submitting the responses, participants received the debriefing note (see Annexure 2b).

Results

Preliminary analysis

In the first step, we tested again whether our manipulation of the target's social class was successful. Participants in the high social class target condition (M = 6.88, SD = 2.50, n = 138), participants in the low social class target condition (M = 3.52, SD = 1.93, n = 141), and participants in the control group (M = 5.35, SD = 2.10, n = 136) differed significantly in their perceptions concerning the social class of the target, $F(2, 412) = 82.67$, $p < .001$, $\eta^2 = .29$. More specifically, the Bonferroni post-hoc statistic revealed that relative to the control condition, participants in the high social class condition perceived the target as high social class ($p < .001$), while participants in low social class condition perceived the target as low social class ($p < .001$). These results suggest that the manipulation of the target's social class was also successful in Study 2.

Table 2 reports the overall means, standard deviations, and intercorrelations of the principal variables. The means, standard deviations, and intercorrelations for the three target conditions are reported in the Supplementary (Tables S4 to S6). The overall results of the intercorrelations of the principal variables show that social mindfulness was significantly positively correlated with social value orientation and objective social class. However, subjective social class and ingroup identification did not correlate with social mindfulness. These results are consistent with the findings of Study 1 and those of Van Doesum et al. (2021, p. 6) which revealed a positive relationship between social value orientation and social mindfulness.

Table 2

Overall means, standard deviations, and intercorrelations of the principal variables (N = 448), Study 2

	1	2	3	4	5
M	30.44	4.53	2.66	3.29	0.61
SD	11.53	2.00	1.30	0.89	0.22
Min	-16.26	1	1	1	0
Max	61.39	10	6	5	1
1. SVO	-				
2. Subjective SC	-.00	-			
3. Objective SC	.13**	.26***	-		
4. Ingroup Id	-.04	.02	-.24**	-	
5. SOMi	.12**	.08	.19**	-.05	-

Note: *** p < .001, ** p < .01, * p< .05; SVO = Social Value Orientation; SC = Social Class, Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

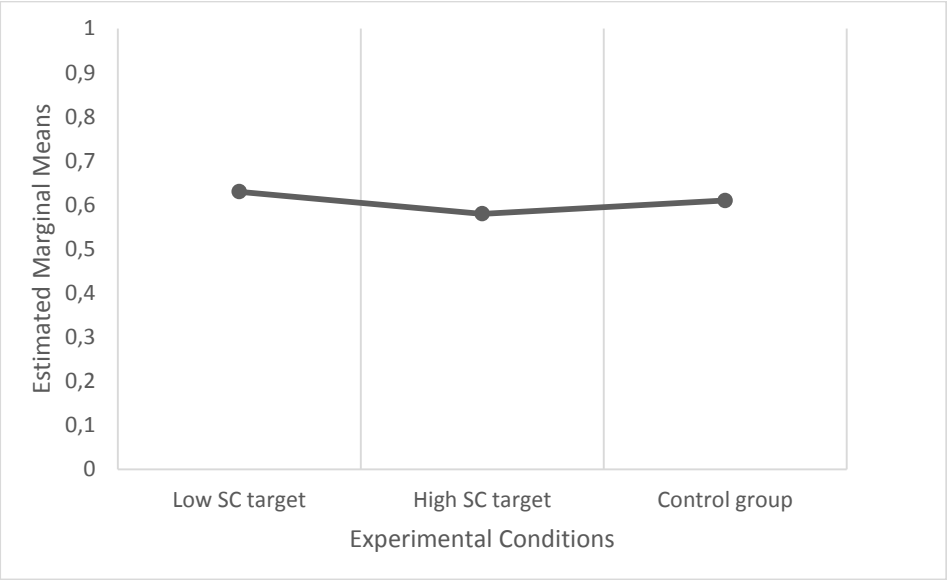
Hypothesis Testing

Like in Study 1, we first assessed the target's social class effect on social mindfulness while controlling for social value orientation and social class using the General Linear Models approach. We entered experimental conditions as the independent variable, social mindfulness as the dependent variable, and social value orientation, subjective and objective social class, and identification with social class as covariates into the model. Replicating the findings of Study 1, the results revealed that the target's social class did not affect social mindfulness, $F(2, 405) = 1.526$, $p = .219$, $\eta_p^2 = .007$. Although participants in the low social

class target condition (M = 0.63, SE = 0.02) scored again slightly higher on social mindfulness, they did not differ statistically significantly from participants in the high social class target condition (M = 0.59, SE = 0.02) and in the control condition (M = 0.61, SE = 0.02) (see Figure 5). Only objective self-social class, $F(1, 405) = 11.570$, $p < .001$, $\eta_p^2 = .028$, had a main effect on social mindfulness while social value orientation, $F(1, 405) = 3.661$, $p = .056$, $\eta_p^2 = .009$, had a marginally significant statistical effect on social mindfulness. Identification with social class, $F(1, 405) = 043$, $p = .835$, $\eta_p^2 = .000$, and subjective self-social class, $F(1, 405) = 1.592$, $p = .208$, $\eta_p^2 = .004$, did not have effects on social mindfulness. Thus, like Study 1, the results of Study 2 did not support any of the alternative hypotheses stating that low social class targets elicit stronger social mindfulness than high social class targets (Hypothesis 1a), that high social class targets elicit stronger social mindfulness than low social class targets (Hypothesis 1b), or that high social class targets elicit stronger social mindfulness in participants from high social class and that low social class targets elicit stronger social mindfulness in participants from low social class (Hypothesis 1c).

Figure 5

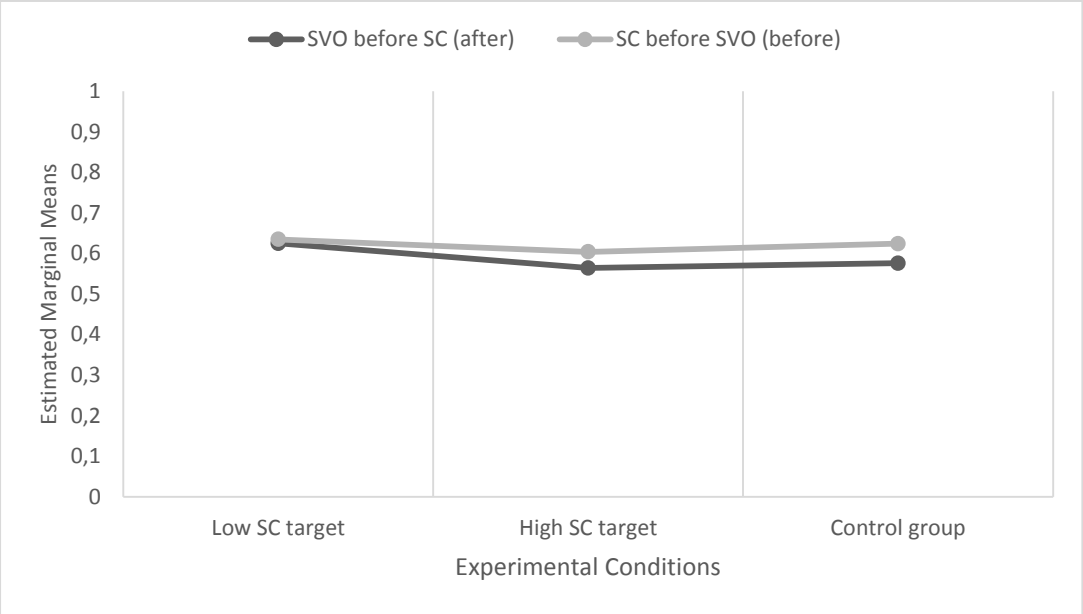
Estimated Marginal Means of social mindfulness per experimental condition, Study 2



In the second step, we controlled whether the order of the self-social class measures influenced objective and subjective self-social class. The order of the self-social class measures either *before* versus *after* the social value orientation measure did not influence the effect of objective self-social class, M_{before} = 2.65, SD_{before} = 1.32, and M_{after} = 2.66, SD_{after} = 1.29, $F(1, 446) = 0.01$, $p = .935$, $\eta^2 = .000$, nor the effect of subjective self-social class, M_{before} = 4.42, SD_{before} = 2.02, and M_{after} = 4.65, SD_{after} = 1.98, $F(1, 446) = 1.56$, $p = .213$, $\eta^2 = .003$ (see Figure 6). Thus, Hypothesis 2 which stated that self-social class of participants is related to social mindfulness under the condition that it is psychologically salient was neither supported nor rejected. What can be concluded, however, is that the self-social class effect was not influenced by the order-effect of our measurements.

Figure 6

Estimated Marginal Means of social mindfulness per experimental condition and order of self-social class, Study 2

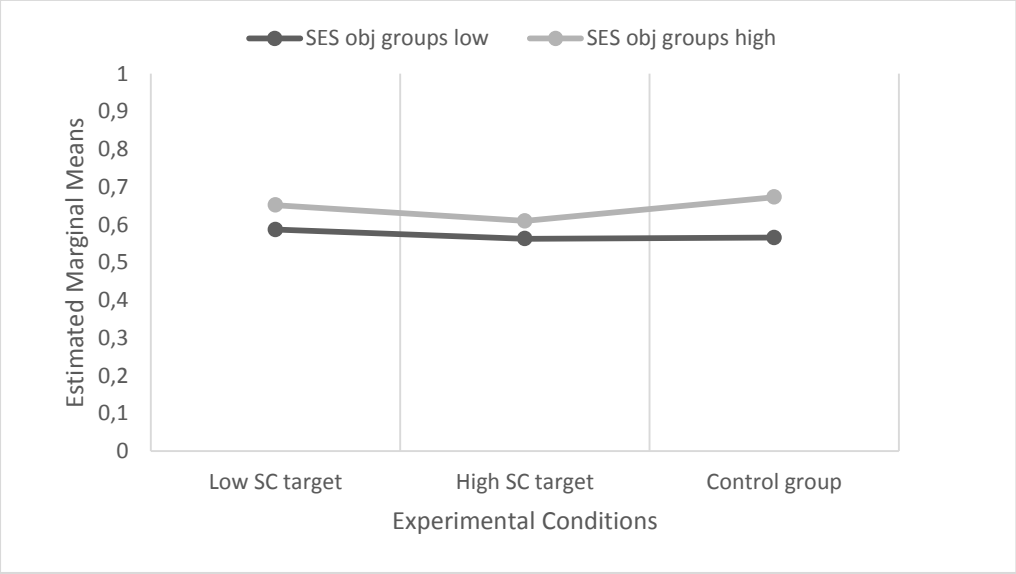


Like in Study 1, we created a two-group variable for the objective self-social class using a median split (Med(X) = 2.33) to test for an interaction effect between the target's social class and objective self-social class on social mindfulness. We entered experimental conditions and the group variable of objective self-social class as independent variables, social mindfulness as a dependent variable, and social value orientation, subjective social class, and identification with social class as covariates into the General Linear Model. The results revealed again that the target's social class did not affect participants' social mindfulness, $F(2, 379) = 1.136$, $p = .322$, $\eta_p^2 = .006$. Similar to Study 1, objective self-social class affected participants' social mindfulness, $F(1, 379) = 9.680$, $p = .002$, $\eta_p^2 = .025$, in that participants from the lower objective self-social class group reported on average lower social mindfulness ($M = 0.57$, $SE = 0.02$) than participants from the higher objective self-social class group ($M = 0.64$, $SE = 0.02$). Like in Study 1, the interaction term between the target's

social class and the objective self-social class was not statistically significant, $F(2, 379) = 0.697$, $p = .498$, $\eta_p^2 = .004$ (see Figure 7). Again, only social value orientation had a significant effect on social mindfulness, $F(1, 379) = 3.900$, $p = .049$, $\eta_p^2 = .010$, whereas subjective self-social class, $F(1, 379) = 2.200$, $p = .139$, $\eta_p^2 = .006$, and identification with social class, $F(1, 379) = 0.697$, $p = .498$, $\eta_p^2 = .004$, did not affect social mindfulness. Similar to Study 1, only the factor of objective self-social class influenced the social mindfulness of participants in the current sample.

Figure 7

Estimated Marginal Means of social mindfulness per experimental condition and objective self-social class of participants, Study 2

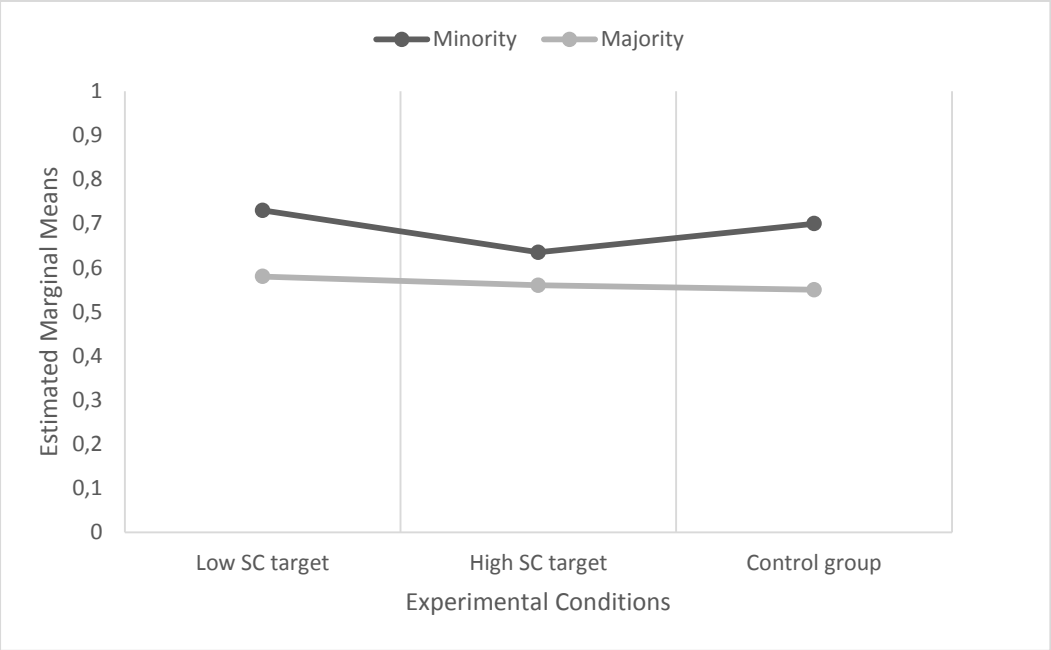


Like in Study 1, in the fourth step of the analysis, we introduced the factor of the majority (i.e., Black South Africans) versus minority (i.e., White, Indian, and Coloured South Africans) groups. The economic differences between these two groups again revealed themselves when comparing the majority and minority groups in the current study concerning

their objective self-social class, M_{maj} = 2.23, SD_{maj} = 1.15, n = 269, and M_{min} = 3.61, SD_{min} = 1.10, n = 138, $F(1, 405) = 136.15$, $p < .001$, $\eta^2 = .252$; and their subjective self-social class, M_{maj} = 4.15, SD_{maj} = 2.01, n = 269, and M_{min} = 5.28, SD_{min} = 1.72, n = 138, $F(1, 405) = 31.45$, $p < .001$, $\eta^2 = .072$. Applying the General Linear Models approach, we entered experimental conditions and majority versus minority groups as independent variables, social mindfulness as the dependent variable, and social value orientation and identification with social class as covariates. The results suggested again that the target's social class did not affect participants' social mindfulness, $F(2, 399) = 2.600$, $p = .076$, $\eta_p^2 = .013$. Nevertheless, participants' majority versus minority group membership affected their social mindfulness, $F(1, 399) = 29.907$, $p < .001$, $\eta_p^2 = .070$, in that participants from the majority group reported again significantly lower social mindfulness ($M = 0.57$, $SE = 0.01$) than participants from the minority groups ($M = 0.69$, $SE = 0.02$). Like in Study 1, the interaction term between the target's social class and participants' majority versus minority group membership was not statistically significant, $F(2, 399) = 1.290$, $p = .276$, $\eta_p^2 = .006$ (see Figure 8). Different from the previous analysis, social value orientation, $F(1,399) = 1.708$, $p = .192$, $\eta_p^2 = .004$, had no effect on social mindfulness. Similar to the previous analysis, identification with social class, $F(1, 399) = 0.26$, $p = .605$, $\eta_p^2 = .001$, had no effect either on social mindfulness.

Figure 8

Estimated Marginal Means of social mindfulness per experimental condition and majority and minority membership of participants, Study 2

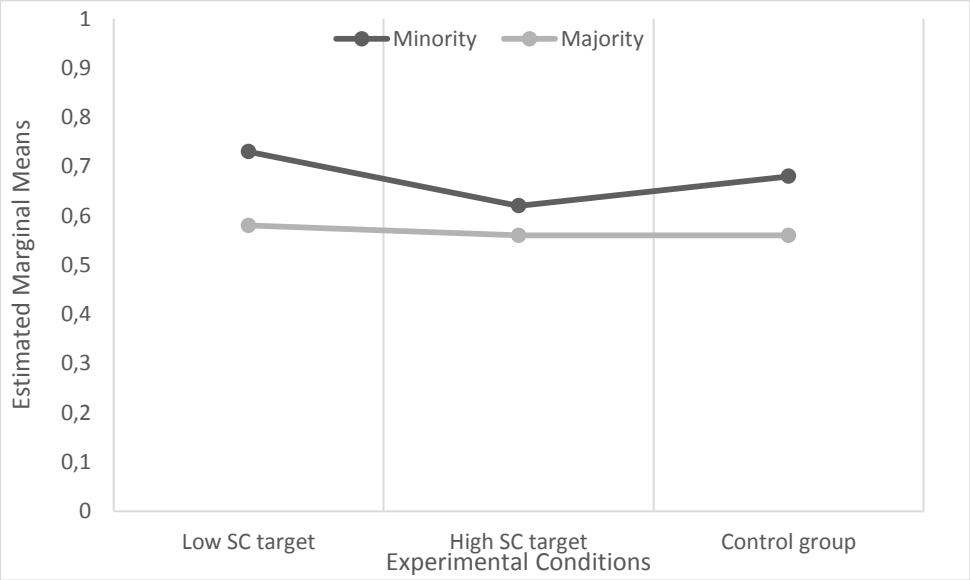


Assuming again that majority and minority groups define themselves not only by their socio-economic status, we repeated the previous analysis but controlled for the objective and subjective self-social class as additional covariates. The results remained the same in that the target's social class did not affect participants' social mindfulness, $F(2, 397) = 2.880$, $p = .057$, $\eta_p^2 = .014$. Notably, the effect of participants' majority versus minority group membership on their social mindfulness remained statistically significant, $F(1, 397) = 14.666$, $p < .001$, $\eta_p^2 = .036$, in that participants from the majority group reported significantly lower social mindfulness ($M = 0.57$, $SE = 0.01$) than participants from the minority groups ($M = 0.67$, $SE = 0.02$). Still, the interaction between the target's social class and participants' majority versus minority group membership did not affect participants' social mindfulness, $F(2, 397) = 1.489$, $p = .227$, $\eta_p^2 = .007$, like it did not in Study 1 (see Figure 9). When controlling for both objective and subjective self-social class, the effect size of the majority

versus minority group membership effect on social mindfulness decreased from a medium partial eta squared of .070 to a small partial eta squared of .036. Like in the previous analysis, social value orientation did not affect social mindfulness, $F(1, 397) = 1.601$, $p = .207$, $\eta_p^2 = .004$, and identification with social class, $F(1, 397) = 0.045$, $p = .833$, $\eta_p^2 = .000$, objective self-social class, $F(1, 397) = 2.157$, $p = .143$, $\eta_p^2 = .009$, and subjective self-social class, $F(1, 397) = 0.501$, $p = .480$, $\eta_p^2 = .001$, did not affect social mindfulness either.

Figure 9

Estimated Marginal Means of social mindfulness per experimental condition and majority and minority membership of participants while controlling for self-social class, Study 2



Discussion

The aim of Study 2 was to re-test the effect of the targets' social class (Hypotheses 1a-1c) and the effect of participants' self-social class on social mindfulness while controlling for the possible order effect of social class measures (Hypothesis 2). The results of Study 2 replicated the findings of Study 1 in that the social class of the target did not influence participants' social mindfulness but that participants from the objective high social class were more socially mindful than participants from the objective low social class. The order of the self-social class measures also did not affect social mindfulness. We, therefore, observed in Study 2 a similar pattern as in Study 1 that no empirical support was found for the fairness, status, and ingroup bias explanation as proposed by Van Doesum et al. (2017) as no social class target effects on social mindfulness were found.

The results of Study 2 also revealed that the order of the self-social class measures did not affect the relationship between participants' self-social class and their social mindfulness. Consequently, our argument that participants' self-social class did not play a role in the studies of Van Doesum et al. (2017, 2021) due to possible order effects of the social class measures was not supported. Concerning the role of self-social class on social mindfulness, the results of Study 2 were similar to Study 1 in that only the objective self-social class but not the subjective self-social class of participants influenced social mindfulness. Again, participants who perceived themselves objectively as low social class showed significantly less social mindfulness than participants who perceived themselves objectively as high social class. These results imply that objective self-social class influences social mindfulness within the social context of the present research which suggests that social context might act as a moderator. Thus, concerning Hypothesis 2, which stated that participants' self-social class is related to social mindfulness under the condition that it is psychologically salient, we cannot conclude with certainty whether our results support or reject the hypothesis. On the one hand,

it might be that social class is an ever-salient social category within the South African context given the ever-salient inequality which would support the hypothesis. On the other hand, we found repeatedly that only objective but not subjective social class influenced social mindfulness which partially contradicts our assumption. To gain certainty, however, additional research needs to be conducted that ideally manipulates participants' relative subjective and/or objective social class (see Piff et al., 2010, Study 2).

Our results concerning social value orientation were mixed because the effect of social value orientation was rather weak in Study 2 compared to Study 1. Like in Study 1, we again observed no relationship between identification with social class and social mindfulness. Previous research showed that ingroup identification (i.e., team membership and nationality) influences prosocial behaviour in that people showed more prosociality towards members of their ingroup than outgroup members (Van Doesum et al., 2016; Fiedler et al., 2018). As previous studies on social class did not specifically control for identification with social class (Piff et al., 2010; Piff & Robinson, 2017; Korndorfer et al.,2015), we are not able to compare our results to previous findings.

Consistent with the results of Study 1, the results of Study 2 revealed again that participants who belong to the socially and economically disadvantaged majority group (i.e., Black South Africans) compared to participants who belong to the minority groups (i.e., White, Indian and Coloured South Africans) were less socially mindful. Different from our studies, past studies (e.g., Van Doesum et al., 2017; 2021) were carried out in WEIRD countries (i.e., The United States, The UK and The Netherlands) where the majority is economically better off than the minorities. We observe in our studies that, minority groups are more comparable in terms of their social mindfulness to the majority groups in WEIRD countries which implies that social and economic status might play a role for people to be socially mindful.

General Discussion

The overall aim of the present research was to test whether target social class and self-social class influence social mindfulness. Our studies were guided by the three alternative explanations of fairness, status, and ingroup bias as proposed by Van Doesum et al. (2017). These explanations were informed by the interdependence theory of Thibaut and Kelley (1978; see also Van Lange & Rusbult, 2012), equity theory (Adams, 1963; cited from Van Doesum, 2013), and the social identity theory (Tajfel & Turner, 1979), respectively. More specifically, in two experimental studies, we tested the competing hypotheses that low social class targets elicit stronger social mindfulness than high social class targets (Hypothesis 1a), while high social class targets elicit stronger social mindfulness than low social class targets (Hypothesis 1b), or that high social class targets elicit stronger social mindfulness in participants from high social class and that low social class targets elicit stronger social mindfulness in participants from low social class (Hypothesis 1c). Moreover, we hypothesised that self-social class is related to social mindfulness under the condition that it is psychologically salient (Hypothesis 2).

Overall, our results of two independent studies revealed that target social class does not influence social mindfulness, and thus no empirical support was found for any of the three competing assumptions (Hypotheses 1a- 1c). Our results imply that participants' social mindfulness was not dependent on whether the target was portrayed as somebody from a high or low social class (Studies 1 and 2). These results are inconsistent with the previous findings of Van Doesum et al. (2017, 2021) who repeatedly found that low social class targets were treated with more social mindfulness than high social class targets. Moreover, in contrast to previous studies which showed that participants' self-social class was unrelated to prosocial behaviour (Van Doesm et al, 2017, 2021), the present results revealed that objective self-social class but not subjective self-social class is related to social mindfulness (Studies 1 and

2). Our results further imply that the effect of self-social class cannot be attributed to the overcoming of methodological limitations of the previous studies because it was independent of any order effect (Study 2) and limited to objective social class (Studies 1 and 2). Like in previous studies (Van Doesum et al., 2013, 2021), social value orientation was positively related with social mindfulness in Study 1. However, in Study 2 we observed mixed results concerning social value orientation which suggests that the effect of social value orientation on social mindfulness might depend on whether it covaries with other factors. Unlike the previous studies (Van Doesum et al., 2013), prosocial personality traits such as honesty-humility and agreeability did not affect social mindfulness in our studies. Lastly, when considering the particular context of South Africa which is different from the social context of previous studies in that the majority group of South Africa (different from previous contexts such as The United States, The UK and The Netherlands) is worse off economically and socially than the minority groups, we found in both studies that the majority group (i.e., Black South Africans) was less socially mindful than the minority groups (i.e., White, Indian and Coloured South Africans) which, however, cannot only be explained by economic differences alone (Studies 1 and 2).

The findings of the present studies have various implications. *Firstly*, the present studies replicated previous findings (Van Doesum et al., 2021) which implied that social mindfulness is relatively lower in South African samples when compared to the samples from WEIRD countries where most previous studies were conducted (Van Doesum et al., 2017, 2021). One could speculate about the reasons for these findings. Four possible reasons might come to mind: the different social contexts, the role of trust, zero-sum beliefs, and the valuability of objects. Firstly, different from previous studies conducted in WEIRD countries (Van Doesum et al., 2017, 2021) where the majority are socially and economically advantaged and minorities are relatively disadvantaged, in South Africa the majority group is

socially and economically disadvantaged while the minority groups are relatively advantaged. It might be that social mindfulness requires a certain economic and social stability (e.g., social capital). For instance, Van Doesum et al. (2021) indicated that social class is obtained from personal, economic, cultural, and social capital instead of economic inequality alone. Secondly, it is not only known that trust between people beyond family ties is a social capital that drives innovation and prosperity within and between societies but also that societies differ in their degree to trust others (Fukuyama, 1995). For instance, the world value survey indicates that South Africans are relatively low in their level of trust compared to other countries such as the Netherlands (Inglehart et al., 2014). For instance, only 23% of South Africans compared to 66% of people from The Netherlands believe that most people can be trusted (Inglehart et al., 2014). People who exhibit low levels of trust are usually less likely to act prosocially relative to those who have high levels of trust (De Cremer & Stouten, 2003). Thirdly, one could also argue that the current samples perceived the uniqueness of the objects used in the social mindfulness paradigm measure from a zero-sum perspective, and thus, the selection of a non-unique object as a personal loss and the selection of a unique object as a personal gain. As zero-sum orientations have been found to reduce cooperation (Chernyak-Hai & Davidai, 2022), one could equally argue that they are negatively related to pro-social behaviour in general and social mindfulness in particular. Lastly and interrelated to the previous argument, participants in the current samples may have perceived the material objects used in the social mindfulness paradigm measure as valuable and thus, not as low-cost. We assume that some of the objects used (i.e., clocks, towels and mugs) are perceived as costly in the South African context as participants were more inclined to pick unique objects rather than non-unique objects. When social mindfulness is accompanied by costs perceived as high, people tend to be less socially mindful (Engel & Van Lange, 2021). Future

research is, however, necessary to test these prepositions that might have influenced the found pattern.

Secondly, our results imply context dependencies of the relationship between social class and social mindfulness. On the one hand, our results suggest that the social class of the targets does not influence participants' social mindfulness in our samples although it did in the studies of Van Doesum et al. (2017, 2021). That might be for different reasons such as interacting with an unknown target. Alternatively, although participants appropriately perceived the target in the social mindfulness measure as either high or low social class according to the manipulation check, they might not have perceived the target as deserving. Previous research has shown that people exhibit more generosity toward those who are perceived as deserving (Engel, 2011: see Van Doesum et al., 2021). Additionally, in the cultural context of South Africa, participants might consider whether their interaction partner is a stranger or someone that they know and hence is more likely to reciprocate their social mindfulness as important. Past studies have indicated that people show more social mindfulness to those whom they know than to strangers (Van Doesum et al., 2018).

Different from previous findings, our results imply that self-social class influences participants' social mindfulness in that those from low self-social class demonstrated significantly less social mindfulness when compared to those from high social class. These findings contradict the research findings on social class by Piff et al. (2010) and Piff and Robinson (2017) who proposed and provided evidence that low social class individuals are more pro-social, generous, trusting, charitable, and helpful than high social class individuals. As most studies on social class effects were also conducted in WEIRD countries (e.g., the United States, Canada, the Netherlands and the UK; see Piff et al., 2010; Kraus et al., 2012; Van Doesum et al., 2017, 2021) where the low social class presents minority groups, we can only speculate about social class effects being dependent on whether the low social class

presents the minority group in society or the majority group as in the case of South Africa. For instance, one could argue that low social class individuals in WEIRD countries are more pro-social, generous, trusting, charitable, and helpful than high social class individuals as these strategies might not only serve intragroup processes (i.e., to support each other in need) or intergroup mobility but also intergroup relations. Whether social class effects, as identified in previous studies (Piff et al., 2010) and suggesting that low social class people are more prosocial than high social class people, are social context-dependent needs to be further studied.

Thirdly, in both studies, the relatively low social mindfulness scores and the lack of the effect of the social class of the target might also result from cultural differences. Cultural differences such as individualism or collectivism can result in variations in pro-social behaviour (Balliet & Van Lange, 2013; see also Spadaro et al., 2022). Individualistic societies have been found to act more prosocial and be more cooperative when they interact with strangers than collectivist societies (Marcus & Le, 2013; See Sparado et al., 2022). It might be that the majority group in South Africa share rather collective values and norms which might reduce their trust in strangers and thus, reduce their social mindfulness towards strangers.

Fourthly, the lack of personality traits effects implies that the personalities of the participants in the current samples do not influence their social mindfulness, and thus, personality traits do not always predict prosocial behaviour. It is possible that in the current context, social norms that prescribe kinship over impersonal relationships played a role. As previously indicated, in situations where social norms about how people are expected to behave are clear, prosocial behaviour will not be driven by personality traits (Dovidio et al., 2017).

Lastly, our results have also implications concerning cooperation in the context of South Africa. It is important to note that our results do not imply that cooperation does not exist in the South African context but it might be less impersonal (with strangers, also known as large-scale) but rather kin-related (known as small-scale) cooperation (Henrich & Muthukrishna, 2021) that guides the relationship of the majority group. Small-scale cooperation is characterised by smaller groups (i.e., clans, villages, and known others) which might place emphasis on kinship and reciprocity, and hence reduce large-scale or impersonal cooperation such as cooperation with strangers (Henrich & Muthukrishna, 2021). The suggestion here is that highly kin-based groups will be less cooperative toward strangers and anonymous others while people who are accustomed to large-scale cooperation will cooperate more with strangers and unknown others. For instance, the studies of Emke (2019) and Schulz et al. (2019, cited from Henrich & Muthukrishna., 2021) revealed that participants from populations that are not highly kin-based and engage in large-scale cooperation are more likely to contribute to strangers in public goods games and donate to strangers. However, further research is necessary to test whether these possible cultural effects concerning cooperation preferences are truly at play.

The present research is not without limitations. Firstly, both studies were internet based and, therefore, the conditions under which participants completed the experiments could not be controlled for. For instance, participants may have experienced some distractions during the experiments. It was also not possible to monitor whether participants completed the experiments alone or in the presence of another person. Future research on the influence of target social class and self-social class on social mindfulness should be conducted in a more controlled lab setting in the context of South Africa. Secondly, our samples are limited to psychology students and thus our findings cannot be generalised to other groups or settings. Future research could address this limitation by sampling from the

general population. Likewise, our samples are restricted to South Africa, and as such our findings cannot be generalized to other non-WEIRD contexts. Certain factors that are unique to South Africa may have influenced our results. For instance, South Africa is rated as one of the most unequal countries in the world (World Bank, 2022). Thirdly, using the name "Thabiso" might have created an intra-group versus intergroup context in our sample that presented majority and minority groups of South Africa. The majority group may have viewed the target as an ingroup member while the minority groups viewed the target as an outgroup member. Consequently, the minority might have been more socially mindful as a result of outgroup favouritism. Future research needs to address this limitation by referring to the target as the "other" person. Lastly, participants in our samples were interacting with a hypothetical target that they did not know and were unlikely to meet in the future. Consequently, our conclusions are only applicable to situations where participants are anonymous and do not think about the ramifications of face-to-face interactions with others either from low or high social classes. Future research should investigate whether similar results will be replicated under the conditions where participants' interactions are real face-to-face interactions.

Although people's ability to be thoughtful of others' needs and interests before making decisions can be assumed to be universal, they might differ in whose needs and interests they are mindful of and to what degree. As the results of the present research imply, the social context matters. More specifically, the social context matters whether people might or might not be in the position to utilize this ability. Somebody whose lived experiences are mainly based on freedom and choices might be psychologically in a better position to consider and even value the freedom and choices of others than somebody whose lived experiences are informed by constraints and pure survival. The latter might not be

psychologically in the position to consider others' freedom to choose as important to them as they do not experience themselves as free.

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Supplementary

Table S1

Overall means, standard deviations, and intercorrelations of the principal variables for participants in low social class target, Study 1 (n =88)

	1	2	3	4	5	6	7	8
M	27.91	3.66	3.19	4.28	2.53	4.43	3.44	0.62
SD	11.92	0.51	0.44	0.58	1.18	1.96	0.82	0.24
Min	-7.82	2.38	2.06	2.75	1	1	1.50	0
Max	60.54	4.63	4.31	5	5.67	10	5	1
1. SVO	-							
2. Honesty-humility	.07	-						
3. Agreeability	-.14*	.26**	-					
4. Altruism	-.07	.39***	.24**	-				
5. Objective SC	.11*	.32***	-.15*	-.01	-			
6. Subjective SC	.15*	.03	-.05	-.09*	.35***	-		
7.Ingroup Id	-.19**	.00	.15**	.02	-.17*	.08	-	
8. SOMi	.09*	.06	-.14*	.10*	.30***	.24**	-.12*	-

Note: *** p < .001, ** p < .01, * p< .05; SVO = Social Value Orientation; SC = Social Class, Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

Table S2

Overall means, standard deviations, and intercorrelations of the principal variables for participants in high social class target, Study 1 (n = 88)

	1	2	3	4	5	6	7	8
M	29.88	3.72	3.19	4.24	2.66	4.72	3.38	0.61
SD	11.09	0.60	0.51	0.61	1.21	2.03	0.92	0.22
Min	0	2.38	2.06	2.50	1	1.33	1	0
Max	47.02	5	4.25	5	6	10	5	1
1. SVO	-							
2. Honesty-humility	.14**	-						
3. Agreeability	-.03	.40***	-					
4. Altruism	-.20**	.42***	.43***	-				
5. Objective SC	.10*	.06	-.18**	.00	-			
6. Subjective SC	-.15**	-.11*	-.17**	-.08	.43***	-		
7. Ingroup Id	-.23**	.08	.05	.06	-.23**	.07	-	
8. SOMi	.17**	.05	-.08	-.07	.23**	.13**	-.13**	-

Note: *** p < .001, ** p < .01, * p< .05; SVO = Social Value Orientation; SC = Social Class, Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

Table S3

Overall means, standard deviations, and intercorrelations of the principal variables for participants in the control condition, Study 1 (n = 89)

	1	2	3	4	5	6	7	8
M	29.37	3.79	3.24	4.26	2.69	4.44	3.49	0.60
SD	10.86	0.52	0.50	0.60	1.09	1.63	0.91	0.22
Min	0.49	2.44	1.75	2.75	1	1	1.33	0
Max	52.33	4.81	4.75	5	5.67	8.33	5	1
1. SVO	-							
2. Honesty-humility	.02	-						
3. Agreeability	-.02	.22***	-					
4. Altruism	-.22**	.39***	.41***	-				
5. Objective SC	.08	-.05	-.15*	-.10*	-			
6. Subjective SC	-.02	.00	.00	-.12*	.09	-		
7. Ingroup Id	-.21**	.09	.32***	-.04	.08	-.08	-	
8. SOMi	-.27**	.09	-.02	-.34***	.11*	.03	-.08	-

Note: *** p < .001, ** p < .01, * p< .05; SVO = Social Value Orientation; SC = Social Class, Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

Table S4

Means, standard deviations, and intercorrelations of the principal variables for participants in low social class target, Study2 (n = 141)

	1	2	3	4	5
M	29.44	4.51	2.62	3.29	0.63
SD	11.97	1.94	1.19	0.92	0.20
Min	-12.23	1	1	1	0
Max	61.39	9.33	5.67	5	1
1. SVO	-				
2. Subjective SC	.O5	-			
3. Objective SC	.09	.20**	-		
4. Ingroup Id	-.16**	.12*	-.13**	-	
5. SOMI	.06	-.06	.13**	-.01	-

Note: *** p < .001, ** p < .01, * p< .05; SVO = Social Value Orientation; SC = Social Class, Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

Table S5

Means, Standard Deviations, and Inter-correlations of the principal variables for participants in high social class target, Study 2 (n = 138)

	1	2	3	4	5
M	29.28	4.71	2.79	3.26	0.58
SD	11.84	2.09	1.40	0.89	0.23
Min	-16.26	1	1	1	0
Max	50.32	10	6	5	1
1. SVO	-				
2. Subjective SC	-.03	-			
3. Objective SC	.13*	.23**	-		
4. Ingroup Id	.02	-.06	-.39**	-	
5. SOMi	.17*	.16*	.17*	-.04	-

Note: *** p < .001, ** p < .01, * p< .05; SVO = Social Value Orientation; SC = Social Class, Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

Table S6

Means, Standard Deviations, and Inter-correlations of the principal variables for participants in control group, Study 2 (n = 136)

	1	2	3	4	5
M	31.70	4.41	2.54	3.32	0.60
SD	10.88	1.98	1.31	0.89	0.23
Min	-2.86	1	1	1.17	0
Max	55.32	10	6	5	1
1. SVO	-				
2. Subjective SC	.06	-			
3. Objective SC	.18*	.32***	-		
4. Ingroup Id	.02	.01	.19*	-	
5. SOMi	.15*	.13*	.28**	-.11*	-

Note: *** p < .001, ** p < .01, * p< .05; SVO = Social Value Orientation; SC = Social Class, Id = Identification; SOMi = social mindfulness (SOMi) paradigm measure

Annexure 1a

Consent form: Study 1

Ethics clearance reference number: 2020-CHS-51069733

Title: Social mindfulness

Dear Prospective Participant

My name is Maleshoane Lejakane and I am a Master's student at the Department of Psychology under the supervision of Prof Kitty Dumont. We are inviting you to participate in a study that is investigating how people socially interact.

WHAT IS THE PURPOSE OF THE STUDY?

The study aims to extend our understanding of social and psychological factors that influence people's social interactions. Because most of the research has been conducted in so-called W.E.I.R.D nations (i.e., western, educated, industrialized, rich, and democratic); we cannot be certain that the very same factors play an equally important role in a context such as South Africa.

WHY AM I BEING INVITED TO PARTICIPATE?

You have been selected to participate in this study as you form part of the target group of this study, namely Unisa students. As previous studies addressing factors influencing social interactions were conducted with students, it is preferable to conduct follow up studies with the same group to ensure comparability of results. Furthermore, as we need rather large sample sizes to be able to apply advanced statistical procedures, we must choose an accessible target group. Permission to use Unisa students as participants were obtained from

the Research Permission Sub-Committee (RPSC) of the Senate Research, Innovation, and Postgraduate Degrees and Commercialisation Committee (SRIPCC).

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

You will be presented with a link that leads you to the next pages where various information, statements, and questions will be presented to you. Your task is to read the information carefully and to answer these statements by clicking on the appropriate answer(s) provided. Please respond as honestly as possible.

The study will take a maximum of 30 minutes to complete.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participation in this study is entirely voluntary, and you may withdraw at any given moment without any consequences.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

As social interactions are the fundamentals on which our society is built, it is important to understand these fundamentals. Therefore, as a participant of this study, you are contributing to the knowledge and understanding of the social and psychological aspects of social interactions.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

To our knowledge, there are no risks or inconveniences involved in participating in this study. However, an email address will be provided in case any participants have any issues related to the study. Prof Kitty Dumont can be contacted at dumonkb@unisa.ac.za.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

Because we use an internet platform on which our questionnaire is up-loaded, no personal information will be asked nor up-loaded. More specifically, no personal information about you is recorded in the dataset, and therefore results can only be analysed at a group level (e.g., females, age groups) for scientific purposes (e.g., MA dissertation, publication in scientific journals).

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

During the project period, the dataset will be stored on my workstation. Data are also stored using OneDrive for back up. The computer and back up will be password secured.

WILL THE DATA BE SHARED WITH OTHERS?

There is an ethical agreement among social psychologists to share their data. After completion of data analyses but before submission of the manuscript, the dataset will be uploaded to a project page on the public repository *Open Science Framework* (osf.io). Datasets will be stored on a server located in Frankfurt am Main, Germany. The dataset will be licensed through CC-By Attribution 4.0 International, allowing sharing and re-using of the dataset with acknowledgment of the original author. Again, please keep in mind that **no information** is recorded in the dataset by which you could be personally identified.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

No incentives will be offered.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

The research was reviewed and approved by the Unisa college of human science ethics review committee.

WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

Because we are not recording any personal information about you, we will not be able to contact you about the results of the research project. However, we will refer to any publication related to this research project at the home page of the Department of Psychology under the name of my supervisor: Prof Kitty Dumont.

Should you have any concerns about how the research has been conducted, you may contact the University's Toll-Free Hotline 0800 86 96 93.

Thank you for taking the time to read this information sheet and for participating in this study.

If you would like to participate in our study, you need to consent to the following:

1. **I have carefully read all information provided.**
2. **I understand all information provided.**

I consent **I do not consent**

Annexure 1b

Debriefing letter: Study 1

You have reached the end of this study. Thank you very much for your time and effort.

We informed you in the introduction that this study focused on factors that influence people's social interactions. This was only one part. We were interested in whether the information we provided about the other person influenced your responses. We, therefore, used an experimental approach for the present study, which means that different participants received different information. We could not be up-front with you right from the beginning because that might have influenced the way you would have responded. We needed to provide different participants with different information about the person who would choose from the objects after you because we aim at establishing that this information determines whether individuals behave pro-socially or not.

Your answers will remain completely anonymous, and all information will be treated confidentially. Results will only be analysed and reported at a group level for scientific purposes (e.g., MA dissertation, publication in scientific journals).

Annexure 2a

Consent form: Study 2

Ethics clearance reference number: 2020-CHS-51069733

Title: Social mindfulness

Dear Prospective Participant

My name is Maleshoane Lejakane and I am a Master's student at the Department of Psychology under the supervision of Prof Kitty Dumont. We are inviting you to participate in a study that is investigating how people socially interact.

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WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

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Should you have any concerns about how the research has been conducted, you may contact the University's Toll-Free Hotline 0800 86 96 93.

Thank you for taking the time to read this information sheet and for participating in this study.

If you would like to participate in our study, you need to consent to the following:

3. **I have carefully read all information provided.**
4. **I understand all information provided.**

I consent **I do not consent**

Annexure 2b

Debriefing letter: Study 2

You have reached the end of this study. Thank you very much for your time and effort.

We informed you in the introduction that this study focused on factors that influence people's social interactions. This was only one part. We were interested in whether the information we provided about the other person influenced your responses. We, therefore, used an experimental approach for the present study, which means that different participants received different information. We could not be up-front with you right from the beginning because that might have influenced the way you would have responded. We needed to provide different participants with different information about the person who would choose from the objects after you because we aim at establishing that this information determines whether individuals behave pro-socially or not.

Your answers will remain completely anonymous, and all information will be treated confidentially. Results will only be analysed and reported at a group level for scientific purposes (e.g., MA dissertation, publication in scientific journals).