

**The Moral Roots of Prosocial Behaviour: Does Meaning in Life Moderate the
Relationship Between Moral Conviction and Prosocial Behaviour?**

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Abstract

During the Russian-Ukrainian war of 2022, many people engaged in prosocial behaviour, that is, voluntary behaviour aimed at benefiting Ukrainians. In this research, we investigated the relationship between moral conviction (i.e., fundamental beliefs of right and wrong) and prosocial behaviour, and the moderating role of meaning in life (i.e. having a sense of coherence, purpose, and significance) in this relationship. We conducted an online survey ($N = 234$) among first year psychology students in the context of the “We stand with Ukraine” movement. We hypothesised that moral conviction is positively associated with prosocial behaviour. Further, we predicted that meaning in life is positively associated with prosocial behaviour. Moreover, we hypothesised that meaning in life strengthens the relationship between moral conviction and prosocial behaviour. In line with our first hypothesis, regression analysis showed that moral conviction was significantly and positively associated with prosocial behaviour. However, we did not find a significant association between meaning in life and prosocial behaviour. Furthermore, meaning in life did not significantly moderate the relationship between moral conviction and prosocial behaviour. Results are discussed in view of previous research on moral convictions and social activism.

Keywords: moral conviction, prosocial behaviour, meaning in life

The Moral Roots of Prosocial Behaviour: Does Meaning in Life Moderate the Relationship Between Moral Conviction and Prosocial Behaviour?

On the 24th of February 2022, Russia invaded Ukraine and a war emerged. Within four weeks, at least 977 Ukrainian citizens died, 1594 citizens became wounded and 3.5 million Ukrainian citizens fled the country (NOS NIEUWS, 2022). All over the world, people expressed their solidarity with Ukraine (Fidler, 2022; Greenberg, 2022; Standwithukraine, n.d.) and react with activistic behaviour, such as collective action (e.g., going on protests supporting Ukraine; Quell, 2022), and prosocial behaviour (e.g., supporting Ukrainian refugees coming to the Netherlands; Grefkens, 2022). Since social activism has positive consequences for societies and individuals, in that they are associated with less depression (Li & Ferraro, 2005), more life satisfaction (Klar & Kasser, 2009), greater well-being (Thoits & Hewitt, 2001), and social change (Van Zomeren et al., 2012), understanding why and under which circumstances people participate in social activism is important.

One of the motivations to take part in social activism is moral conviction (Skitka & Mullen, 2002; Van Zomeren et al., 2012). Moral convictions are strong attitudes reflecting one's core beliefs about right and wrong (Skitka & Mullen, 2002). Research shows that moral conviction predicts different forms of social activism, such as participation in collective action (Skitka & Bauman, 2008; Van Zomeren et al., 2012; Zaal et al., 2011) and engagement in prosocial behaviour (Kende et al., 2017). However, research on moral conviction has predominantly focused on collective action as a consequence of moral conviction, while prosocial behaviour has not received much attention (Kende, 2016). Furthermore, we know little about the circumstances under which moral conviction is associated with social activism.

Despite these constraints in the existing literature, there is initial evidence showing that moral conviction does predict prosocial behaviour (Kende et al., 2017). In line with this

research, we aim to investigate and conceptually replicate the relationship between moral conviction and prosocial behaviour. Additionally, we aim to provide more insight into the conditions under which this relationship between moral conviction and prosocial behaviour occurs, by examining whether meaning in life may moderate this relationship. Meaning in life refers to having a sense of coherence, purpose, and significance in one's life (Heintzelman & King, 2014a; Steger, 2012), and may be a possible moderator because of its association with goal-directed behaviour (Feldman & Snyder, 2005). Therefore, in the current research, we seek to answer the following research question: Does meaning in life moderate the relationship between moral conviction and prosocial behaviour?

Moral Conviction

Moral convictions are a special class of strong attitudes that are based on fundamental beliefs of right and wrong, or, moral and immoral (Skitka & Mullen, 2002). Since moral convictions are conflated with other strong attitudes (Skitka et al., 2005), which may be based on personal preferences and/or social conventions (Nucci & Turiel, 2001), it is important to differentiate between them. For example, "I strongly support vegetarianism because it is the morally right thing to do and a matter of moral principle" is an example of a moral conviction. In contrast, "I strongly support vegetarianism because I feel like going for this diet" is an example of an attitude based on preference or personal taste. Attitudes based on personal preferences are a matter of taste, perceived as subjective inclinations and associated with a high level of tolerance (Nucci & Turiel, 2001; Skitka et al., 2021). Attitudes can also be based on social conventions (Nucci & Turiel, 2001; Skitka et al., 2005). For example, "I strongly support vegetarianism because everyone else I know does it" reflects an attitude grounded in convention. Convention-based attitudes are connected with a certain group or culture and changed opinions in this group or culture would likely change one's personal attitude (Skitka et al., 2005; Skitka et al., 2021).

While both preference-based and convention-based attitudes can be strong attitudes, moral convictions hold distinct features that make them psychologically different from other strong attitudes (Skitka et al., 2005). In contrast to nonmoral strong attitudes, people tend to perceive moral convictions as universal and objective facts (Skitka et al., 2005). Also, moral convictions involve “oughts” and “shoulds” that direct subsequent behaviour (Skitka et al., 2005). This close link between moral convictions and behaviour highlights the motivational and energising character of moral convictions to drive socially relevant behaviours. Indeed, research shows that moral conviction is more closely connected with behaviour than other strong attitudes (Skitka et al., 2005) and predicts activist behaviour, like signing petitions and participating in protests (Van Zomeren et al., 2012), voting (Skitka & Morgan, 2014), and prosocial behaviour (e.g., volunteerism; Kende et al., 2017).

Moral Conviction and Prosocial Behaviour

There is some research indicating that moral conviction predicts prosocial behaviour (Kende et al., 2017). Prosocial behaviour refers to behaviour benefitting someone else (Bierhoff, 2002; Zhang & Zhao, 2020). This behaviour is voluntary and not due to professional obligations (Bierhoff, 2002). Moreover, prosocial behaviour is not necessarily performed out of empathic concerns (Bierhoff, 2002). Examples of prosocial behaviour are volunteering (Snyder, 2009) and donating blood, money or time (Zhang & Zhao, 2020).

Skitka and Mullen (2002) already suggested that engagement in prosocial behaviour could be partly explained by moral conviction, however, this hypothesis was not empirically investigated. Kende and colleagues (2017) provided the first empirical evidence for this relationship by examining voluntary acts among volunteers in the Hungary refugee crisis of 2015. Volunteers were involved in helping activities, like transporting refugees, (financially) supporting refugees, and collecting clothes for the refugees (Kende et al., 2017). Results showed that moral convictions explained why volunteers were motivated to engage in these

helping activities, which are specific forms of prosocial behaviour. In line with this finding, we hypothesise that moral conviction is positively associated with prosocial behaviour.

We suggest that moral convictions are positively associated with prosocial behaviour because of their moral energising nature. As mentioned above, moral convictions involve “oughts” and “shoulds” that motivate one’s behaviour (Skitka et al., 2005; Skitka & Mullen, 2002). Especially in circumstances that threaten one’s moral convictions, people feel compelled to behave according to their moral convictions and to prove to others or themselves that they are good persons (Skitka & Mullen, 2002). This feeling of obligation (Sabucedo et al., 2018) is directed to oneself, not to others. As such, it is a matter of acting in line with who one is, instead of complying to others’ or society’s expectations, as is the case with convention-based attitudes (Skitka et al., 2005). Thus, moral conviction brings about feelings of personal obligation which motivates individuals to act in line with their moral convictions, for instance by engaging in prosocial behaviour, which in turn confirms their self-view of being a “fundamentally decent and good person” (Skitka & Mullen, 2002, p. 36).

The Moderating Role of Meaning in Life

Even though there is already some evidence showing that moral conviction can predict prosocial behaviour, that is, volunteerism (Kende et al., 2017), we know little about the conditions under which this effect can occur. We propose that meaning in life may moderate the relationship between moral conviction and prosocial behaviour because meaning in life is associated with goal-directed behaviour (Feldman & Snyder, 2005).

Meaning in life refers to having a sense of understanding regarding one’s life (*coherence*), being led and motivated by valued goals (*purpose*), and feeling that one’s life matters in the world (*significance*; Heintzelman & King, 2014a; Martela & Steger, 2016; Steger, 2012). More precisely, coherence, also called comprehension, is about having an overarching life story in which new experiences fit neatly and which provides understanding

about these new experiences. Purpose, on the other hand, is the making and pursuing of personally valued goals (George & Park, 2016; Steger, 2012). These goals are based on core aspects of who one is (George & Park, 2016), such as moral convictions. Finally, significance, or existential mattering, is the belief that one's personal life is of importance in the world and that one can influence other people (George & Park, 2016; Martela & Steger, 2016). Altogether, having a strong sense of meaning in life entails that people understand their life events, pursue important goals that are in line with their moral principles and who they are, and can contribute to other people's lives.

Since meaning in life is regarded as a fundamental human need (Yalom, 1980), people who have meaning in life are motivated to preserve this meaning, even under threatening circumstances (Heine et al., 2006). To preserve one's sense of meaning in life, one can engage in meaning-enhancing behaviours, such as prosocial behaviour (Van Tongeren et al., 2016; Klein, 2017). Prosocial behaviour might be able to increase meaning in life because it increases people's feeling of having a significant impact beyond themselves (Van Tongeren et al., 2016). Thus, in light of threats to meaning in life, people are motivated to engage in prosocial behaviour in order to restore one's sense of significance. Therefore, we propose that meaning in life is positively associated with prosocial behaviour.

Furthermore, we propose that meaning in life strengthens the relationship between moral conviction and prosocial behaviour. As described earlier, meaning in life entails making and pursuing goals that are in line with fundamental beliefs (George & Park, 2016; Steger, 2012). This aspect of purpose is, sometimes together with significance, regarded as the motivational component of meaning in life (Heintzelman & King, 2014b; Martela & Steger, 2016; Steger, 2012). Purpose in life may motivate behaviour because it is associated with a sense of being able to adhere to one's goals (Feldman & Snyder, 2005; Yuen, 2021). Thus, having a will, as is suggested by the very nature of moral convictions (Skitka &

Mullen, 2002), as well as knowing the way, as is suggested by having purpose, make people more likely to actually behave in line with their moral convictions (see Snyder et al., 1991). Therefore, we suggest that having a high sense of meaning in life makes the relationship between moral conviction and prosocial behaviour stronger.

The Current Research

The aim of this research is to investigate the relationship between moral conviction and prosocial behaviour, as well as how meaning in life can moderate this relationship. We hypothesise that 1) moral conviction is positively associated with prosocial behaviour, 2) meaning in life is positively associated with prosocial behaviour, and 3) meaning in life strengthens the association between moral conviction and prosocial behaviour, such that the relationship between moral conviction and prosocial behaviour is stronger for people scoring high on meaning in life, compared with people scoring low on meaning in life. We test these hypotheses in the context of the 2022 Ukrainian war crisis, using both war immigration and Russian military invasion as moral issues. We chose two issues of moral conviction to gain insight into the replicability of the findings.

Method

Participants and Design

A total of 234 first-year Psychology Bachelor students at the University of Groningen participated in the online study in exchange for 0.6 course credits. The sample consisted of 56 males, 176 females, 1 other, and 1 prefer not to say, ranging in age between 18 to 27 ($M = 20.06$, $SD = 1.83$). Ninety-nine participants were recruited from the English Psychology program and 135 participants were recruited from the Dutch Psychology program. We used a correlational study design, in which moral conviction was the independent variable, prosocial behaviour the dependent variable, and meaning in life the moderator.

Procedure

The study was approved by the Ethical Committee for Psychology of the University of Groningen on April 19th 2022. Participants were recruited through the internal university participants pool of first year psychology students of the University of Groningen (i.e., SONA), and completed the English study online via Qualtrics. To participate in the study, participants were asked to give informed consent and permission to collect and treat their data in compliance with the General Data Protection Regulation guidelines.

In the first part of the study, participants were asked about their opinions on several societal issues, namely Russian military invasion, war immigration, racial inequality, and human-made climate change. Participants filled out a questionnaire about their attitudes (e.g., moral conviction) towards each one of these four issues. The target issues of moral conviction were Russian military invasion and war immigration, and the other were filler issues. Next, participants were presented with two social movement contexts, namely “We stand with Ukraine”, and the “Black Lives Matter movement”, and filled out some measures of social activism (e.g., prosocial behaviour) in these contexts. The social movement of interest is “We stand with Ukraine”, and the other movement was not relevant to the hypothesis testing for this study. In the third part of the study, participants completed a questionnaire that included a measure of meaning in life, and other variables that were not relevant for the hypotheses of this study. Finally, participants provided some socio-demographic information (i.e., age, gender), and were debriefed and thanked for their participation.

Measures

Moral Conviction

First, we measured participants’ general attitude towards the target issues (i.e., war immigration and Russian military invasion) of moral conviction. Participants were asked to indicate the extent to which they supported or opposed war immigration/Russian military

invasion on a 7-point Likert scale from 1 (*strongly oppose*) to 7 (*strongly support*). To assess moral conviction (Skitka et al., 2005) about war immigration and Russian military invasion, participants indicated how much their opinion on war immigration/Russian military invasion was “a reflection of their core moral beliefs and convictions”, “connected to their beliefs about fundamental right and wrong” and “based on moral principle” (war immigration: $M = 5.65$, $SD = 1.17$; Russian military invasion: $M = 5.45$, $SD = 1.78$), by using a 7-point Likert scale (1 = *not at all*, 7 = *very much*). The Cronbach’s alpha for the moral conviction scale about war immigration was .88. The Cronbach’s alpha for the moral conviction scale about Russian military invasion was .91.

Prosocial Behaviour

To measure prosocial behaviour towards Ukrainian refugees, we created six items (adapted from Kende et al., 2017). Participants indicated their willingness to “donate old clothes to a charity organisation that is helping Ukrainian refugees”, “donate 15 euros to a charity organisation that is helping Ukrainian refugees”, “volunteer in an Ukrainian refugee camp nearby, for instance, by sorting the donated items, or helping in the kitchen”, “help Ukrainian refugees with their official documents”, “take part in a fundraising project to support Ukrainian refugees”, and “offer emotional support to Ukrainian refugees” ($\alpha = .81$, $M = 4.98$, $SD = 1.17$). The items were rated on a 7-point Likert scale (1 = *not at all*, 7 = *very much*).

Meaning in Life

For the assessment of meaning in life, we used the presence subscale of the Meaning in Life Questionnaire (MLQ-P; Steger et al., 2006). The MLQ-P included items such as “I understand my life’s meaning”, “My life has a clear sense of purpose”, “I have a good sense of what makes life meaningful”, and “I have discovered a satisfying life purpose” ($\alpha = .87$, M

= 3.21, $SD = 0.90$). Answers were rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*).

Results

Preliminary Analyses

We examined scale reliabilities, correlations between variables, means, and standard deviations (see Table 1). Moral conviction about war immigration was positively correlated with prosocial behaviour ($r = .206, p = .002$). Likewise, moral conviction about Russian military invasion was also positively correlated with prosocial behaviour ($r = .153, p = .019$). Both moral conviction about war immigration ($r = .014, p = .836$) and moral conviction about Russian military invasion ($r = -.062, p = .343$) are not significantly correlated with meaning in life. Furthermore, meaning in life was not significantly correlated with prosocial behaviour ($r = .104, p = .114$).

Table 1

Scale Reliabilities, Means, Standard Deviations, and Correlations

	α	\bar{x}	s	2	3	4
1 MC Russian Invasion	0.91	5.45	1.78	.429**	-.062	.153*
2 MC Immigration	0.88	5.65	1.17	1	.014	.206**
3 Meaning in life	0.87	3.21	0.90		1	.104
4 Prosocial Behaviour	0.81	4.98	1.17			1

Note: ** $p < .01$, * $p < .05$

Hypotheses Testing

Before running our model, we first centred the independent variable (e.g., moral conviction) and moderator (e.g., meaning in life) in order to be able to conduct regression analyses. Then, we computed an interaction variable. In order to test the hypotheses, we ran two linear regression analyses. In Model 1, we entered moral convictions on *war immigration*, meaning in life, and the interaction effect between meaning in life and moral convictions about war immigration, to predict prosocial behaviour. With an aim of replicating Model 1, in Model 2, we entered moral convictions on *Russian military invasion*, meaning in life and the interaction effect between meaning in life and moral convictions about Russian military invasion, to predict prosocial behaviour. Assumptions were met in both models (see Appendix A for the assumption checks of Model 1 and Appendix B for the assumption checks of Model 2).

In Model 1, the overall regression model was statistically significant ($R^2 = 0.05$, $F(3, 230) = 4.38$, $p = .005$). In line with our first hypothesis, moral convictions about war immigration were positively and significantly associated with prosocial behaviour ($\beta = 0.20$, $t(233) = 3.04$, $p = .003$, $f^2 = 0.24$, 95% CI [0.07, 0.33]). Meaning in life, however, was positively but not significantly associated with prosocial behaviour ($\beta = 0.10$, $t(233) = 1.58$, $p = 0.116$, $f^2 = 0.11$, 95% CI [-0.03, 0.30]). Furthermore, results showed no significant interaction between meaning in life and moral conviction ($\beta = 0.04$, $t(233) = 0.56$, $p = 0.575$, $f^2 = 0.04$, 95% CI [-0.09, 0.16]).

In the second model, we found similar results. Again, the overall regression model was significant ($R^2 = 0.41$, $F(3, 230) = 3.29$, $p = .022$), moral conviction about Russian military invasion was positively and significantly associated with prosocial behaviour ($\beta = 0.17$, $t(233) = 2.61$, $p = .010$, $f^2 = 0.20$, 95% CI [0.03, 0.20]), and the interaction between meaning in life and moral conviction was not significant ($\beta = -0.07$, $t(233) = -1.08$, $p = .281$,

$f^2 = -0.07$, 95% CI [-0.16, 0.05). In contrast to our first model, however, we did find a marginal association between meaning in life and prosocial behaviour ($\beta = 0.13$, $t(233) = 1.94$, $p = .054$, $f^2 = 0.14$, 95% CI [-0.00, 0.34]).

Discussion

In this research, we investigated the relationship between moral conviction and prosocial behaviour, as well as the moderating role of meaning in life in this relationship. In line with Kende and colleagues (2017), we hypothesised that moral conviction was positively associated with prosocial behaviour. Also, we hypothesised that meaning in life was positively associated with prosocial behaviour. Furthermore, we hypothesised that meaning in life would moderate the relationship between moral conviction and prosocial behaviour. Particularly, we expected that the relationship between moral conviction and prosocial behaviour was stronger for people having a high sense of meaning in life compared to those who have a low sense of meaning in life. We conducted a study in the context of the Russian-Ukrainian war and used two issues of moral conviction (i.e., war immigration and Russian military invasion) to test and replicate the same model. We found that both moral conviction about war immigration and moral conviction about Russian military invasion were positively associated with prosocial behaviour. Therefore, our first hypothesis is confirmed. However, we found mixed results regarding the relationship between meaning in life and prosocial behaviour, such that this relationship was not significant in the first model but marginally positively significant in the second model. Moreover, we found no significant interaction effects, indicating that meaning in life did not play a moderating role in the relationship between moral conviction and prosocial behaviour.

Theoretical Implications

In this research, we replicated previous investigations (Kende et al., 2017) in the context of the Russian-Ukrainian war by showing that moral convictions about war

immigration and Russian military invasion are positively associated with prosocial behaviour. Furthermore, we contributed to the overall literature on the relationship between moral convictions and social activism. Past research has primarily focused on collective action as a consequence of moral convictions (e.g., Van Zomeren et al., 2012) but we extended this research by examining another form of social activism, that is, prosocial behaviour. Consequently, our research implies that moral convictions are positively associated with several forms of social activism.

We found mixed results regarding the relationship between meaning in life and prosocial behaviour. In our first model, in which war immigration was used as a moral issue, meaning in life was not significantly associated with prosocial behaviour. In the second model, however, using Russian military invasion as a moral issue, meaning in life was found to be marginally positively associated with prosocial behaviour. Past research has found predominantly positive associations between meaning in life and prosocial behaviour (Klein, 2017; Van Tongeren et al., 2016; Zhang & Zhao, 2020), suggesting that our research had to deal with methodological issues. Indeed, there was little variance in the sample regarding the prosocial behaviour measure, as well as regarding the meaning in life measure, such that both measures showed high means. These high means suggest that our current research did not have enough variance to detect a significant and positive relationship between meaning in life and prosocial behaviour, though previous research suggests that this relationship does exist. Still, our research leaves open the possibility that meaning in life is unrelated to prosocial behaviour. Therefore, more research is needed to investigate the relationship between meaning in life and prosocial behaviour.

In contrast with our hypothesis, we did not find an interaction effect between meaning in life and moral conviction. This suggests that moral convictions energise people to act in line with these fundamental beliefs, regardless of their level of meaning in life. As such,

having a high sense of purpose does not seem to be an extra energising factor to act in line with one's values, which may be because moral conviction is already very motivating in itself. However, finding no interaction effect between moral conviction and meaning in life may also be due to methodological issues, which will be discussed in the following section.

Limitations and Directions for Further Research

The first limitation of the current research concerns the sample. Our sample consisted of highly-educated, first-year psychology students, and consisted predominantly of women. As such, the sample was homogeneous, making it difficult to generalise the results to other populations. Therefore, further research should test the same hypotheses in a more diverse sample.

The second limitation of our research is that we used the currently occurring Russian-Ukrainian war as a context in which participants could indicate their attitudes on two moral issues, that is, war immigration and Russian military invasion. Using such a specific context diminishes the generalizability of our findings to other settings. However, as the context referred to a relevant, real-world situation, ecological validity might have been high. Still, further research should replicate this study in a different context in order to generalise our results.

A third limitation relates to the use of self-report measures. By asking participants about their willingness to engage in several prosocial behaviours, people might have given socially desirable answers, leading to higher levels of prosocial behaviour. To overcome this limitation, further research should investigate actual behaviour by conducting longitudinal studies.

The fourth limitation of our research refers to the measure we used for meaning in life. First of all, the presence subscale of the Meaning in Life Questionnaire (Steger et al., 2006) measures meaning in life in overall terms, not differentiating between the coherence,

purpose, and significance aspects of meaning in life. Since the purpose component is regarded to be the motivational aspect of meaning in life (Steger, 2012), the scale might have been too broad to detect relationships between meaning in life and prosocial behaviour. Second, we did not make use of reversed items, which may have resulted in a lenient response pattern (Costin & Vignoles, 2020). Therefore, while we used a frequently used and validated scale (Costin & Vignoles, 2020; Steger et al., 2006), further research should use scales that specify the three aspects of meaning in life and/or contain reversed items, such as the multidimensional MIL scale (Costin & Vignoles, 2020).

Conclusion

This study investigated the relationship between moral convictions and prosocial behaviour, as well as the moderating role of meaning in life in this relationship. We conducted an online survey among first-year psychology students in which we added moral convictions about war immigration and Russian military invasion, prosocial behaviour, and meaning in life, in the context of the Russian-Ukrainian war. We found that moral convictions were positively associated with prosocial behaviour, replicating previous findings. In contrast to our expectation, meaning in life was only in one model marginally associated with prosocial behaviour, and did not moderate the relationship between moral conviction and prosocial behaviour. Further research needs to test our hypotheses in different contexts and using different samples. Furthermore, more research needs to be done to the conditions under which moral conviction is positively associated with prosocial behaviour.

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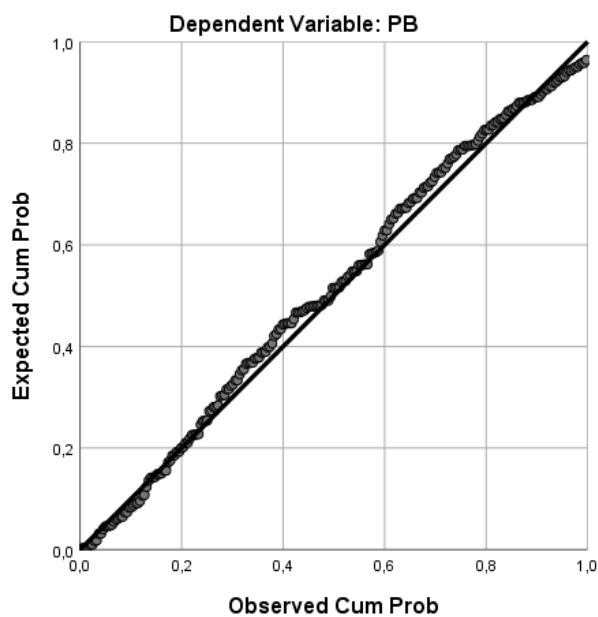
Appendix A

Assumption Checks War Immigration Model

This appendix contains the assumption checks for Model 1, in which moral convictions on war immigration, meaning in life, and the interaction effect between meaning in life and moral convictions about war immigration were entered. Figure 1 contains the normal Predicted Probability plot of standardised residuals. This plot illustrates that the data consisted of almost normally distributed errors, hence we complied to the assumption of normal distribution. Figure 2 contains a scatterplot, which shows a random pattern that is only slightly skewed to the right. This indicates that the assumptions of homoscedasticity and linearity were met. Finally, meaning in life and moral conviction on war immigration were not multicollinear, as the VIF-value was 1.00. Therefore, all assumptions underlying our regression analysis for Model 1 were met.

Figure 1

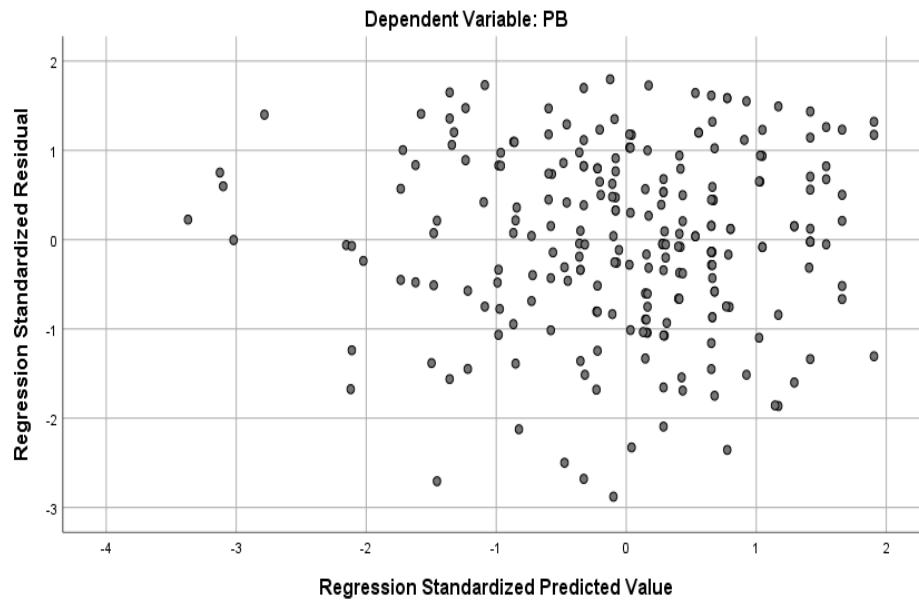
Predicted Probability Plot for Prosocial Behaviour in War Immigration Model



Note: PB = Prosocial Behaviour

Figure 2

Scatterplot for Prosocial Behaviour in War Immigration Model



Note: PB = Prosocial Behaviour

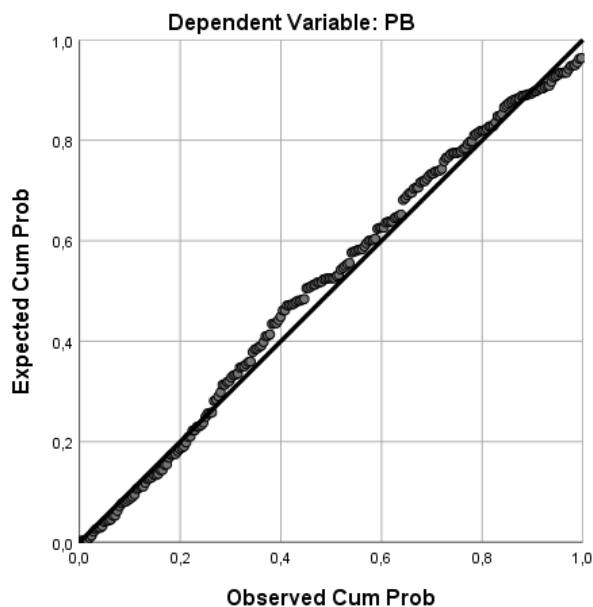
Appendix B

Assumption Checks Russian Military Invasion Model

This appendix contains the assumption checks for Model 2, in which moral convictions on Russian military invasion, meaning in life, and the interaction effect between meaning in life and moral convictions about Russian military invasion were entered. Figure 3 contains the normal Predicted Probability plot of standardised residuals, which shows that the data contained nearly normally distributed errors. Therefore, we met the assumption of normal distribution. Figure 4 contains a scatterplot, which demonstrates a random pattern. This indicates that we complied with the assumptions of homoscedasticity and linearity. Finally, meaning in life and moral conviction on Russian military invasion were not multicollinear, as the VIF-value was 1.00. Therefore, all assumptions underlying our regression analysis for Model 2 were met.

Figure 3

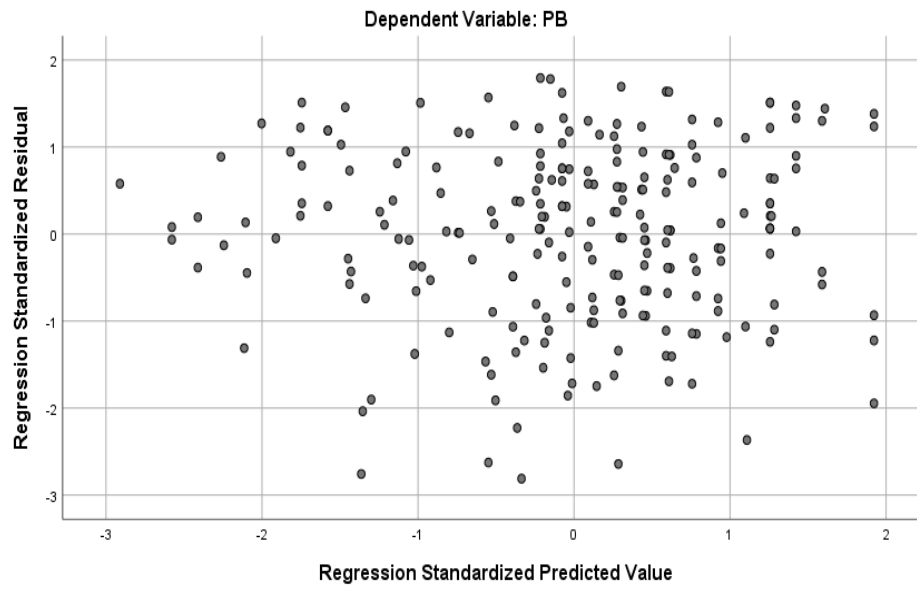
Predicted Probability Plot for Prosocial Behaviour in Russian Military Invasion Model



Note: PB = Prosocial Behaviour

Figure 4

Scatterplot for Prosocial Behaviour in Russian Military Invasion Model



Note: PB = Prosocial Behaviour