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Structural vs. Individual Causes for Homelessness: Effects on
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Structural vs. Individual Causes for Homelessness: Effects on Social Judgements

Introduction

Homelessness is one the most visible manifestations of social exclusion. It is not only a social policy issue but a daily interpersonal reality (Farha, 2015; Marinucci et al., 2023; Mikula, 2025; United Nations, n.d.). Encountering a person living on the streets is one of the more direct ways in which people are confronted with social disadvantage in their day-to-day lives (Young & Petty, 2019). These encounters often trigger immediate judgements: Who is this person? How did they end up here? And, perhaps most importantly, do they deserve help?

There is no single globally agreed-upon definition for homelessness. There is unanimity regarding the breadth of living conditions that can be referred to as homelessness (Toro, 2007). The ‘European Federation of National Organisations Working with the Homeless’ (FEANTSA) formulated the ‘European Typology of Homelessness and Housing Exclusion’ (ETHOS). They propose four categories of homelessness across Europe:

1) rooflessness, also called sleeping ‘rough’ or on the streets, 2) houselessness, meaning having no own place but staying temporarily in shelters, 3) insecure housing, or being at the brink of losing housing, and 4) inadequate housing, which is unfit and overcrowded housing (FEANTSA, 2005; Tipple & Speak, 2005).

Austrian national homelessness statistics report numbers regarding only people literally without permanent housing, which is equivalent to the first and second ETHOS categories. The figures are based on individuals officially recorded as homeless or staying in emergency shelters. In the year 2024, 21,073 homeless people were registered (Bundesministerium für Arbeit, Soziales, Gesundheit, Pflege und Konsumentenschutz, 2025). This represents an increase from the 20,573 people registered in the year 2023 (Schöber et al., 2025). Data from FEANTSA points to a worsening situation. Europe-wide, there was a 70 percent increase in homelessness from 2009 to 2019 (Serme-Morin & Coupechoux, 2021) and later estimates show that the prevalence of homelessness is still rising (Charbonnier & Coupechoux, 2025; Horvat & Coupechoux, 2024). Given the growing number of homeless people, their visibility in everyday life is increasing, for instance through more frequent direct encounters in public spaces. Understanding how people perceive individuals experiencing homelessness therefore becomes even more important, as these perceptions significantly shape the belief that homeless people are deserving of help (Clifford & Piston, 2017; B. A. Lee et al., 1991; Link et al., 1995; Tsai et al., 2019).

Stereotype Content Model

When interacting with the social environment, humans are faced with social uncertainty, as other people's minds are private and their actions and reactions largely unpredictable. It is in their best interest to reduce this uncertainty and to make predictions about the motives and behaviors of others (FeldmanHall & Shenhav, 2019). Social knowledge, for instance the group membership of the person being encountered, influences perception at very early stages, even at an unconscious level. This information is then used to evaluate the other person and decide how to react in any given situation (FeldmanHall & Shenhav, 2019; Fiske, 1993; Otten et al., 2017; Ziv & Hadad, 2021).

A highly influential framework addressing the formation of social judgements is the *stereotype content model* by Fiske and colleagues (2002). It has been tested and replicated across multiple samples, cultures and contexts (Caprariello et al., 2009; Choi et al., 2025; Cortes, 2024; Cuddy et al., 2009; Heydarian et al., 2022; Mize & Manago, 2018; Shen et al., 2019). It proposes two dimensions that primarily make up how people evaluate others: warmth and competence. Warmth means others' anticipated intentions, while competence is their perceived ability to enact these intentions. These dimensions are conceptually independent, so the evaluation of warmth does not affect the evaluation of competence, and vice versa. They reliably predict emotional reactions, behavioral responses, and, as the title suggests, stereotype content.

There is a variable that precedes each of the two dimensions: Warmth is linked to perceived competition, so that higher competition leads to lower warmth ratings. Competence is associated with status, whereby higher status induces higher competence ratings. Four stereotype quadrants can be created depending on the combinations of warmth and competence, each triggering a unique emotion: These following emotional patterns propose that mixed stereotypes (i.e. being liked in one dimension but disliked in the other) are the norm and can explain stereotype content better than the overall assumption of uniform negativity:

- 1) Groups viewed as both warm and competent lead to admiration. An example is the middle class, or more generally one's own ingroup.
- 2) Groups stereotyped as cold but competent lead to envy, as can be observed among rich people.
- 3) Groups seen as warm but incompetent elicit pity. Examples include elderly people, people with disabilities and young children.

- 4) Groups viewed as neither warm nor competent cause contempt. This can be seen with refugees, drug addicts and, most relevant for this thesis, homeless people (Cuddy et al., 2008; Fiske, 2018; Fiske et al., 2002).

The above categorization emphasizes that homeless people are generally viewed very negatively. How do these evaluations transform into behavior? The stereotype content model contributed to the conception of the *BIAS map*, short for ‘behaviors from intergroup affect and stereotypes’, theorized by Cuddy and colleagues (2007). It attempts to predict behavior in social interactions by considering the warmth and competence dimensions. The emotional reactions outlined above are presented as mediators. According to the BIAS map, the warmth evaluation predicts active behaviors: ‘warm’ groups elicit active helping behavior, while ‘cold’ groups trigger active harm or attack. The competence evaluation triggers passive behaviors: competent groups lead to passive facilitation, including association and convenient cooperation, while incompetent groups elicit passive harm, that is neglect and ignorance. This explains why some groups receive help yet are marginalized, while others are respected yet actively targeted. The former are pitied groups (high warmth, low competence), such as the elderly, and the latter are envied groups (low warmth, high competence), like rich people. Groups that are admired (high warmth and competence), so typically the ingroup, are both actively cared for and passively valued. Lastly, groups that are despised (low warmth and competence) are both attacked and passively excluded, as has been evident among homeless people. This extension of the stereotype content model is particularly relevant for understanding real-world outcomes (e.g. discrimination, resource allocation, intention to help) that emerge from systematic stereotype-driven behavioral tendencies (Cuddy et al., 2007, 2008).

Together, the stereotype content model and the BIAS map explain how warmth and competence evaluations affect emotional reactions, and how active and passive help and harm therefore result. The investigation of warmth and competence evaluations of homeless people remains limited. The theories predict that they are viewed as neither warm nor competent. As a result, they induce contempt within the people they encounter, which leads to them being both actively hated and passively neglected. These theories therefore assume hateful reactions toward all people without housing, though empirical studies are needed to provide support for this prediction.

But do all homeless people really encounter the same negative responses? The *attribution-affect-action theory of behavior* (Weiner, 1980) proposes that the perceived controllability of an individual’s need state predicts whether they are offered help.

Attribution-Affect-Action Theory of Behavior

Many theories have been formulated in the past to explain what motivates behavior (Bandhu et al., 2024). Among these, attribution theories as a whole have incited a lot of research throughout many fields (Muschetto & Siegel, 2021). They attempt to find out what is perceived as the cause of behaviors; i.e. they answer the ‘why’ questions (Bandhu et al., 2024; Graham, 2020; Schmitt, 2015). With his book *The Psychology of Interpersonal Relations* (Heider, 1958), Heider formed the theoretical foundation for all attribution theories to follow (Graham, 2020; Malle, 2011; Manusov & Spitzberg, 2008; Schmitt, 2015; Weiner, 2015). One of the most prominent attribution theories is the attribution-affect-action theory of behavior, also sometimes called the cognition-emotion-action theory (Savolainen, 2013; Weiner, 1980).

In Weiner’s attributional framework, three core dimensions predict affective and behavioral reactions: locus of causality (i.e. internal versus external), stability and controllability. However, which dimensions are actually relevant depends on the situation. In achievement-related motivations regarding success and failure (Brun et al., 2021; Graham, 2020; Weiner, 1985), the whole triad is central. When examining stigmas, the empirical focus includes controllability and stability (Weiner et al., 1988). By contrast, in interpersonal helping paradigms, Weiner originally refers to controllability and locus as the main dimensions (Weiner, 1980). The common dimension in all of these instances is controllability. Accordingly, in later articles specifically studying this theory with respect to helping behavior, primarily controllability, or synonymously responsibility, is seen as the focal driver of subsequent behaviors (Greitemeyer & Rudolph, 2003; Kramarić & Kamenov, 2025; Meyer & Mulherin, 1980; Reisenzein, 1986; Rudolph et al., 2004; Schmidt & Weiner, 1988).

The attribution-affect-action theory of behavior proposes that attributions cause emotional reactions, which subsequently predict helping behavior. When the cause of a need state is perceived as controllable, meaning the person is responsible for their situation, this triggers anger in the potential helper. The consequence is neglect, or reduced help. In contrast, when the causes are seen as uncontrollable, meaning the person in need is not responsible for their situation, this elicits pity or sympathy. As a result, the willingness to help increases (Schmidt & Weiner, 1988). This relationship has repeatedly been supported in the past (Greitemeyer & Rudolph, 2003; Kramarić & Kamenov, 2025; Reisenzein, 1986; Rudolph et al., 2004).

Several researchers have applied responsibility perceptions and helping intentions in their studies. A frequently investigated target group is people living with AIDS. In the high-

responsibility vignettes, they are portrayed as having contracted HIV from more controllable behaviors (e.g. unprotected sex or drug use). In the low responsibility vignettes, the HIV infection is attributed to less controllable causes (e.g. nurses using contaminated needles, blood transfusions or having been born to a carrier mother). Across studies, participants were less willing to donate to AIDS patients in the high responsibility conditions (Badahdah & Alkhder, 2006; Guo et al., 2022; Kogut, 2011). Similar findings have been reported for heart disease, cancers (DeMotta, 2021; Lobchuk et al., 2008) and COVID-19 (Hellmann et al., 2021). Beyond health-related conditions, people experiencing financial difficulties receive less support when they are seen as responsible for their own plight (Campbell et al., 2001; Hansen, 2019). Even for victims of disasters, people donate less when the disasters are seen as humanly caused as opposed to naturally caused (Zagefka et al., 2011).

Much of the evidence mentioned above describes helping decisions in relatively uncommon situations, where potential helpers are physically distant from the person in need and the decision is often abstract or hypothetical. In contrast, homelessness is encountered in everyday life, often in face-to-face interactions, creating both frequent and immediate opportunities to help. This makes homelessness a highly relevant and naturalistic context to test whether responsibility perceptions translate into real-life helping intentions. But which factors are used to differentiate homelessness into high versus low responsibility situations? In the past, researchers have distinguished between several causes of homelessness. Two of these can be found in a majority of the studies: structural and individual causes.

Structural Causes

Numerous studies about the drivers of homelessness identify structural factors as the main causes. Among these, housing problems are consistently named: the unavailability of affordable rent and limited vacancies are significant determinants of homelessness (Brisson, 2025; Byrne et al., 2013; Elliott & Krivo, 1991; Hanratty, 2017; Pratoomchat, 2019). The broader economic condition and especially a high national poverty rate play a major role (Byrne et al., 2013; Elliott & Krivo, 1991; Pratoomchat, 2019). Labor market conditions, which include the general unemployment rate, employment instability and income inequality, are oftentimes emphasized (Byrne et al., 2013; Hanratty, 2017; Pratoomchat, 2019). Furthermore, systematic discrimination in employment, the wealth distribution, housing and imprisonment disproportionately pushes minority groups toward homelessness (Fowle, 2022; Shinn, 2007).

Individual Causes

The other group of reasons typically named for homelessness are individual factors, which are specific to the individuals' personal lives. Among these, mental health issues seem to be the most recurring in literature. Studies repeatedly document drug and alcohol dependence as playing a critical role in the pathway toward homelessness (Giano et al., 2020; Heffron et al., 1997; Nilsson et al., 2019; Schreiter et al., 2021; Shelton et al., 2009; Zhao, 2023). Also, suicidality and psychotic disorders are major risk factors (Nilsson et al., 2019; Schreiter et al., 2021). Adverse life events, especially in childhood and adolescence, increase the probability of becoming homeless in adulthood: One of these is out-of-home care, such as foster care, group homes or limited contact to family in general (Czaderny, 2020; Heffron et al., 1997; Nilsson et al., 2019; Shelton et al., 2009). Physical abuse (Nilsson et al., 2019), delinquency (Heffron et al., 1997) and a lack of education, for instance due to school exclusion (Alowaimier, 2018; Czaderny, 2020; Heffron et al., 1997), are other pre-adulthood experiences associated with an increased risk of homelessness later in life. For adults, previous incarceration (Giano et al., 2020; Nilsson et al., 2019) and domestic violence (Zhao, 2023) may lead to homelessness. It is a lack of resilience, or a growing inability to cope with adverse life events, that eventually leads to becoming homeless. Frequently, the last step before homelessness is the complete breakdown of close personal relationships (Mabhala et al., 2017).

Integration of Causes

The literature presented so far focuses on either individual or structural causes as primarily leading to homelessness. There is an abundance of studies arguing that both factors are relevant and interact with each other (Bramley & Fitzpatrick, 2018; Kingree & Daves, 2011; Main, 1998; Neale, 1997; Piat et al., 2014). They are not always ascribed equal roles: The 'new orthodoxy' of homelessness defines structural factors as the environment of risk. Individual factors represent personal vulnerabilities, which make people more susceptible to the harmful conditions (i.e. structural factors) under which homelessness arises (Fitzpatrick, 2005; Pleace, 2016; Somerville, 2013). An analogy that clarifies this structure uses the childhood game of musical chairs: The number of empty chairs are the affordable houses available. There are less chairs than people playing. Therefore, when the music stops, not all players are able to grab a chair. In the game, those people moving too slow to get a seat are the people with individual vulnerabilities in real life that end up unhoused. According to this analogy, good structural environments (i.e. enough chairs) can balance out personal risk factors (i.e. moving too slow) (Shinn, 2007).

Taken together, this research demonstrates that homelessness is best explained as resulting from both individual and structural factors. So is this body of research reflected in the attitudes of laypeople? A few studies have asked the public about the perceived reasons for becoming unhoused. The responses are in line with the past literature: participants similarly differentiated between structural and individual causes (Batterham, 2020; Ljubotina et al., 2022; Petit et al., 2019; Phillips, 2015; Toro et al., 2007; Toro & McDonnell, 1992; Tsai et al., 2019).

The Causes for Homelessness and the Intention to Help

Having established that the causes for homelessness are typically attributed to structural or individual factors, the question remains, how these attributions affect the intention to help. Few studies have been conducted on this topic so far. Survey (Labban et al., 2023; Tausen & Fossum, 2024) and experimental (Gross & Wronski, 2021) studies largely agree that perceived dispositional, or controllable, causes for homelessness (i.e. high internal responsibility) reduce the willingness to help compared to structural explanations (i.e. high external responsibility).

The willingness to help variable is differently operationalized in each of these studies. Labban and colleagues (2023) specifically measured charitable giving via the item “How likely are you to donate money to a homelessness charity”. Tausen and Fossum (2024) used the ‘willingness to help scale,’ which asks participants to rate how likely they are to, for instance, “spend a night as a volunteer at a homeless shelter” and “persuade others to get involved in helping the homeless”. Lastly, Gross and Wronski (2021) assessed the support for government policies directed at reducing homelessness. They also used a dictator game, whereby the participants were given money which they could split with a homelessness charity.

What all of these studies have in common is that they measure the intention to help homeless people as a generalized, anonymous group, rather than a single, identified individual. Labban et al. (2023) and Gross & Wronski (2021) refer to the support for government policies and homelessness charities, thereby targeting homeless people collectively. The willingness to help scale used by Tausen and Fossum (2024) largely follows the same logic by asking about attitudes toward people experiencing homelessness in general. Although some items in the scale refer to helping a single homeless individual (e.g. “allowing a homeless individual to move in with me until this individual could find a place to live”), this target remains anonymous and unidentified. Therefore, it still reflects generalized helping intentions rather than responses to a concrete person.

Why is this research gap relevant? Giving to homelessness charities and supporting government policies assisting people experiencing homelessness are only two of the ways people can help. Though both are important, charity donations and voting decisions are made quite infrequently. By contrast, people encounter homeless individuals (almost) every day. The aforementioned findings regarding homeless people as a group do not necessarily generalize to the attitudes and behaviors towards specific homeless individuals. Past studies on the *identifiable victim effect* show that people are more willing to help identifiable individual victims as opposed to anonymous victim groups (Heizler & Israeli, 2021; S. Lee & Feeley, 2016; Oppenheimer & Olivola, 2011; Small & Loewenstein, 2003). However, Kogut (2011) researched the attitudes toward victim groups versus single victims (men with AIDS and single mothers) and found that when victims are presented as being responsible for their plight, their identification decreases helping. She argues that it is easier to blame a single person than a whole group of people (Kogut, 2011). What becomes clear is that it is insufficient to study only the responses towards groups of people. The present study helps address this research gap in homelessness research by examining the reactions toward a single homeless individual, as they occur in day-to-day life.

Short Summary

To summarize, there is a growing prevalence of homelessness in Austria and across Europe. Public attitudes toward people experiencing homelessness are therefore becoming even more important. Drawing on the stereotype content model and the BIAS map, homeless people are typically perceived as low in both warmth and competence, which elicits contempt and both active and passive harm. The attribution-affect-action theory refines this perspective by proposing that helping behavior depends on the perceived responsibility: when homelessness is attributed to individual causes, observers respond with neglect; whereas structural attributions make helping behaviors more likely. Although few existing studies provide initial support for this, they examine attitudes towards homeless people as a generalized group rather than toward specific individuals. This constitutes a relevant research gap, as real-life daily interactions occur with identifiable individuals rather than abstract groups.

The Present Study

Based on the literature described above, this study aimed to answer the question, how the perceived cause of an individual's homelessness shapes social judgements. A distinction was made between individual and structural causes for homelessness: Participants read about a homeless person named Alex whose homelessness was described as resulting either from

individual or from structural factors. Three dependent variables were included that represent distinct, yet theoretically connected components of social judgements:

The first dependent variable was the attribution of responsibility, either on the homeless person or on external factors. This is the most proximal target of the experimental manipulation and the core variable in attribution-based helping theories. It assesses whether the manipulation successfully shifts the participants' causal interpretations in the intended direction. The hypotheses that were tested are the following:

H1a: Participants in the individual-cause condition view Alex as responsible for his homelessness to a greater extent than participants in the structural-cause condition.

H1b: Participants in the individual-cause condition view external factors as responsible to a lesser extent than participants in the structural-cause condition.

The second dependent variable was the judgement of warmth and competence. As illustrated above, the stereotype content model framework postulates that everyone uses the dimensions warmth and competence to make sense of other people (Fiske et al., 2002), and subsequently help or harm them (Cuddy et al., 2007). Including warmth and competence evaluations helps reveal whether differences in causal attribution extend beyond simple responsibility ascriptions and shape more fundamental character impressions. The study therefore also provides further needed empirical investigation of warmth and competence evaluations of homeless people. Past research has shown that structural attributions are generally associated with a more positive view on homeless people (Ljubotina et al., 2022), while dispositional attributions lead to more negative judgements (Tausen & Fossum, 2024). Considering these findings, warmth and competence evaluations may similarly be affected, leading to the following hypotheses:

H2a: Participants in the individual-cause condition ascribe lower levels of warmth to Alex than participants in the structural-cause condition.

H2b: Participants in the individual-cause condition ascribe lower levels of competence to Alex than participants in the structural-cause condition.

The third and final dependent variable was the intention to help the homeless person by donating money, measured through a dictator game setup (Thielmann et al., 2021). Intentions are strong predictors of actual behaviors (Rossetto et al., 2016; Sheeran, 2002), making this variable suitable for estimating real-world helping behavior. So far, studies have focussed on attitudes toward homeless people as a group instead of singular persons. Based on this research showing that structural causes lead to a stronger willingness to help homeless people in general (Gross & Wronski, 2021; Labban et al., 2023; Tausen & Fossum, 2024), the

present study comparably tested the following, specifically regarding the homeless individual Alex:

H3: Participants in the individual-cause condition are less willing to donate money to Alex than participants in the structural-cause condition.

In addition to the preregistered hypotheses, several exploratory analyses were conducted.

Method

Open Science and Ethics

The project draft was submitted to the departmental review board of the *Department of Occupational, Economic, and Social Psychology* at the University of Vienna and assigned the DRB number 2025/W/027. It was reviewed and approved on December 18, 2025. The preregistration is publicly available and can be found using the following link:

<https://osf.io/m62cw>. The data set, analysis code, report and sociodemographics are also publicly available and can be accessed under: <https://osf.io/h9qnc/overview>

Design

To test the effect of causal framing on social judgements, the study employed a one-factorial between-participants experimental design. The independent variable was whether the target person's homelessness was described as resulting from individual or structural factors. Participants were randomly assigned to one of the two conditions and read a vignette describing how Alex became homeless. Afterward, they completed a survey assessing their evaluations of and behavioral intentions toward him, to reveal whether the different homelessness causes affect these judgements. Specifically, the dependent variables were the attribution of responsibility (H1), warmth and competence evaluations (H2) and monetary helping intentions (H3).

Participants

Participants were recruited via personal contacts and student Whatsapp groups, primarily groups for psychology students. To prevent them from recognizing the purpose of the study, the starting page simply stated that the participants will read a short description about Alex and then answer a few questions, concealing the manipulation.

An a priori power analysis was conducted using G*Power version 3.1 (Faul et al., 2009) for 'Means: Difference between two independent means (two groups)'. Because all hypotheses were directional, a one-tailed test was used for calculation. As no directly comparable effect size estimate was found in the literature, a medium effect size ($d = 0.5$) was defined as the smallest effect size of theoretical interest. Using a one-tailed t -test, $d = 0.5$,

$\alpha = 0.05$, power = 0.8 and an allocation ratio of 1, a total sample size of 100 participants was calculated. Data collection was concluded when complete and valid data of 100 participants, so 50 people per condition, could be included for analysis.

Two attention checks were added, one after reading the vignette and another at the end of the survey, to ensure attentive responding throughout the survey. Based on an expected exclusion rate from failed checks of 5-10%, the initial recruitment goal was 110 participants. Ultimately, 128 completed data sets were collected, of which $N = 113$ were eligible after exclusions. Of these, $n = 55$ (48.67%) were assigned to the individual-cause condition and $n = 58$ (51.33%) to the structural-cause condition.

The sociodemographics of the sample are as follows: 59.3% of the sample identified as female, and 37.2% identified as male. The mean age was 25.7 years ($SD = 9.4$). Almost all of the participants reported having an Austrian or German nationality. All but one of the participants had a high school diploma and more than half of them were students at the time of survey completion. Over 86% of participants reported being at least slightly left-leaning. Almost all participants had never experienced or been at risk of experiencing homelessness. A more detailed breakdown of the sample characteristics can be found in the supplementary materials.

Materials

Participants were randomly assigned to one of two conditions via SoSci Survey (Leiner, 2024): the individual-cause or the structural-cause condition. In both conditions, they read a vignette describing a homeless man called Alex and the circumstances that lead to his homelessness. The target person was chosen to be a man because in Austria, which is where this study was conducted, approximately 68% of homeless people are male (Schöber et al., 2025). A homeless man therefore reflects the demographic majority of unhoused people.

The study employed an experimental vignette methodology. The use of vignettes to examine attitudes and hypothetical decisions has been shown to be a valid approach to measure real-world judgements and behaviors (Aguinis & Bradley, 2014; Alexander & Becker, 1978; Hainmueller et al., 2015). The research by Kogut (2011) presented earlier similarly relied on vignettes. Vignettes were therefore considered appropriate for manipulating causal framing and measuring subsequent attitudes and behaviors. The two conditions differed in the factors presented as leading to Alex' homelessness. It has already been established that typically either individual or structural factors, or both, are named as the

primary causes for homelessness. Hence, the causes mentioned in the vignettes varied accordingly:

Individual-Cause Condition

In the individual-cause condition, the homeless person was described as follows: “Due to a family conflict, Alex moved out on his own before he was fully financially prepared. He had a tendency to isolate himself when stressed and sometimes drank to cope with anxiety. This affected his punctuality and focus, making it hard to keep a job longer than a few weeks. He struggled to maintain consistent schedules, which made paying bills difficult. Savings ran low, and unexpected expenses piled up. He alienated himself from his friends and hadn’t spoken with any of his family members for years, which left him with little to no support. Gradually, he fell behind on rent and eventually lost his apartment. He now has to rely on temporary shelters.”

Structural-Cause Condition

In contrast, in the structural-cause condition, the homeless person was described as follows: “Alex had lived in his apartment for years, paying rent on time and working steadily at a small grocery store. When the building was sold to a new developer, his rent doubled overnight, far beyond what his paycheck could cover. He searched for cheaper places, but the waiting lists for affordable housing stretched for months. At the same time, the store cut his hours because of declining business in the neighborhood. With no nearby family, he fell behind on rent within a few weeks. He tried applying for housing assistance, but the process was slow and overloaded with applicants. By the time his application moved forward, he had already been evicted. With nowhere else to go, he ended up having to sleep in a shelter.”

Measures

Attribution of Responsibility

The first dependent variable measured was the attribution of responsibility. The attribution-affect-action theory (Weiner, 1980) postulates that the perceived locus of causality, stability and controllability influence emotional and behavioral responses. As stated earlier, in interpersonal helping contexts, the dimension most consistently examined is controllability or, synonymously, responsibility. This was therefore the variable most relevant for the present study.

Participants were asked to indicate the extent to which they believed that the individual’s homelessness was caused by internal and external factors. They answered the following two items along a 6-point Likert-type scale (1 = *not at all* to 6 = *completely*): “To what extent is Alex responsible for his homelessness?” and “To what extent are external

factors responsible for his homelessness?”. Higher scores reflected a stronger agreement with the responsibility attribution. Similarly framed items have been used in prior research examining evaluations of homeless people (Kogut, 2011; Labban et al., 2023; Vázquez et al., 2017) as well as in studies investigating responsibility attributions in health and injury contexts (Bulman & Wortman, 1977; Hart et al., 2003; Hsieh & Yucel-Aybat, 2018).

The two items were analyzed independently rather than combined to a single score: Internal and external attributions are not necessarily opposite ends of a single dimension but can coexist when individuals simultaneously view personal vulnerabilities and structural constraints as contributing factors. After all, as presented earlier, literature oftentimes emphasizes that homelessness typically results from an interaction of individual and structural causes rather than from one factor alone.

Stereotype Content Model

The second dependent variable assessed warmth and competence. The stereotype content model proposes that social judgements are generally structured along these two dimensions. Homeless people are predicted to be rated low on both dimensions (Fiske et al., 2002). An extension of this theory is the BIAS map (Cuddy et al., 2007), according to which these evaluations shape subsequent helping and harming behaviors, as delineated above. The present study tested whether the warmth and competence ascriptions of homeless individuals vary depending on the perceived cause of their homelessness. Because they represent the core criteria used to evaluate others, they allow for assessing broader social judgements beyond simple responsibility attributions. This measure may therefore give first insights into why homeless people might be treated differently.

The warmth and competence evaluations were measured using the items introduced in the original study by Fiske and colleagues (2002). The core question remained the same for all items: “How ... is Alex”. For the warmth evaluation, the ellipsis was replaced with the adjectives *tolerant*, *warm*, *good natured* and *sincere*. These four ratings were averaged to form one composite warmth score. The scale demonstrated good internal consistency ($\alpha = .85$). For competence, the adjectives *competent*, *confident*, *independent*, *competitive* and *intelligent* were used. These five ratings were averaged to form one composite competence score. This scale also demonstrated good internal consistency ($\alpha = .82$). All responses were given on a 6-point Likert-type scale (1 = *not at all*, 6 = *extremely*). The instruction simply read to rate Alex according to several characteristics. This was different from Fiske’s original formulation, which asked how the participants think society in general evaluates the target group, instead of inquiring personal beliefs. However, the variable of interest in the present

study was the individual-level judgement rather than perceived societal stereotypes. As such, the instructions were adapted accordingly.

Intention to Help

The final dependent variable was the intention to help. This variable has previously been measured through items such as ‘How likely are you to donate money to a homelessness charity?’, responded to along Likert-type scales (Hsieh & Yucel-Aybat, 2018; Labban et al., 2023; Tausen & Fossum, 2024). Such operationalizations measure abstract intentions or attitudes rather than real behavioral decisions. To solve this shortcoming, a dictator game paradigm (Thielmann et al., 2021) was employed. In dictator games, participants decide how to allocate a resource, usually money, between themselves and another person, while the recipient has no say as to how much money they receive. This setup resembles real-life donation situations, increasing ecological validity and providing a behavioral measure of prosociality (Barr & Zeitlin, 2010; Benz & Meier, 2008; Franzen & Pointner, 2013; Stoop, 2014). Furthermore, by making the recipient a specific, identifiable person instead of a charity, the design directly addressed the aforementioned research gap by examining whether causality framing influences helping responses toward a homeless individual.

In the present study, participants read a short prompt instructing them to imagine that they have won 20€ in a tombola. Then, they were asked: “How much of this money would you realistically give to Alex, if you walked past him after winning the prize?”. This design was adapted from DeMotta (2021), who measured charitable giving to organizations treating people with serious illnesses. By linking the donation to the tombola prize, it is ensured that the money is ‘available’ to all participants in cash. This might reduce the effects of the socioeconomic and employment status (DeMotta, 2021). Due to financial constraints, no actual money was given to the participants, meaning the helping intentions remained hypothetical.

Exploratory Measures

In addition to the primary dependent variables, the following exploratory variables were assessed:

Percentage Allocation of Responsibility. For the attribution of responsibility, the Likert-type items measured the extent to which participants ascribed responsibility to internal and external factors, independently. However, the perceived balance of causes can be unclear, especially in cases where both internal and external responsibility are rated as high or low. Therefore, they were additionally asked the following question: “How much do you find individual versus external factors responsible for Alex’ homelessness? Please assign a

percentage of responsibility to each factor, so that the overall assignment of responsibility totals 100%". This item was adapted from the 'blame attribution questionnaire' (Bulman & Wortman, 1977). It measures a related but distinct construct: It reveals how participants weigh the factors relative to another by forcing a trade-off between them. This percentage-allocation item was examined using descriptive statistics and exploratory comparisons to contextualize the Likert-type scale responses.

Belief in a Just World. Following the research focus of Kogut (2011), the present study also looked at the belief in a just world. As the term implies, this is the belief that people ultimately get what they deserve. When individuals encounter an unjust situation, in which innocent victims suffer, this contradicts their world view. As a result, they are motivated to reduce this conflict and therefore restore justice (Dalbert, 2009; Hafer & Sutton, 2016; Lerner, 1980a; Lerner & Miller, 1978; Montada, 1998). People do this by helping the victim (Bierhoff et al., 1991; Igou et al., 2021; Zuckerman, 1975) or by devaluating and blaming the victim so that they are perceived as deserving of their plight (Lerner & Simmons, 1966; Nudelman & Shiloh, 2011; Rubin & Peplau, 1973). Lerner (1980) proposes that people first try to assist the victim and only when this is not possible, they reinterpret their deservingness (Lerner, 1980b).

Likewise, Kogut (2011) found that a high belief in a just world increases negative evaluations of identifiable victims, such as blame. However, her studies show that this belief, both when measured and when experimentally manipulated, leads to lower monetary contributions (Kogut, 2011). Similarly, Appelbaum and colleagues (2006) concluded that participants with a strong belief in a just world consider a victim that actively tries to overcome their financial hardships less deserving of government help. A possible explanation for this is that the threat to their belief system is so grave that the victim is dismissed even more (Appelbaum et al., 2006). These studies contradict the aforementioned findings that people with a higher belief in a just world are more willing to help suffering victims. The present study attempted to look into this contradiction further. Theoretically, the belief in a just world could moderate the relationship between the attribution condition and the intention to help in either direction. Furthermore, the associations of the causality framing with the other dependent variables (i.e. attribution of responsibility and the warmth and competence evaluations) might be moderated by this belief. Due to limited statistical power, the present study did not inferentially test such interaction effects but instead examined the traits through exploratory analyses.

The ‘global belief in a just world scale’ was constructed by Lipkus (1991). It has shown good psychometric properties (Hellman et al., 2008; Reich & Wang, 2015) and was as such administered in the present study. It consists of the following seven items answered along a 6-point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*). “I feel that people get what they are entitled to have”, “I feel that a person’s efforts are noticed and rewarded”, “I feel that people earn the rewards and punishments they get”, “I feel that people who meet with misfortune have brought it on to themselves”, “I feel that people get what they deserve”, “I feel that rewards and punishments are fairly given” and “I basically feel that the world is a fair place” (Lipkus, 1991). The ratings of these items were averaged to form one composite score for the belief in a just world. The scale demonstrated good internal consistency ($\alpha = .89$).

Procedure

Participants first accessed the study via a SoSci Survey online link. They were presented with an informed consent statement outlining the general purpose of the study (without revealing the manipulation of homelessness causes), the voluntary nature of participation, the anonymity of responses, data usage and sharing procedures and contact information. Participants indicated whether they agree to the terms and conditions and consent that their data will be used and shared anonymously.

Participants were then randomly assigned to either the individual-cause or the structural-cause condition and directed to the vignette describing how Alex became homeless. Following the vignette, the first attention check was presented (“If you are paying thorough attention, choose 6”). The formulation of the attention checks deviated from the preregistration, which is reported and justified in Appendix C.

Subsequently, participants completed the measures of the attribution of responsibility, first responding to the two Likert-type items and then the percentage-allocation item. This was followed by the warmth and competence evaluations. Then, a prompt instructed the participants to imagine that they have won 20€ and to specify how much of this money they would give Alex, which served as the behavioral measure of the intention to help.

After the measurement of the dependent variables, they filled out the global belief in a just world scale and responded to the second attention check (“If you are paying thorough attention, choose 1”). Finally, participants provided demographic information, including their age, gender identity, citizenship, highest educational level, employment status, prior

experience with or risk of homelessness, and political orientation. A ‘prefer not to say’ option was available for most demographic variables.

On the last page, participants received a debriefing statement explaining that the study aimed to investigate whether individual versus structural explanations of homelessness influence subsequent attitudes and behavioral intentions. The debriefing also highlighted the societal relevance and thanked participants for their contribution. The whole questionnaire is provided in Appendix D.

Data was collected between February 8th and February 24th, 2026. On average, participants took 4 min 39 s ($SD = 1$ min 30 s) to complete the questionnaire.

Analysis Plan

To test the hypotheses, a series of one-tailed independent-samples t-tests were conducted. Statistical significance was evaluated at $p \leq .05$. In all analyses, the independent variable was the cause for homelessness described in the vignettes (individual-cause versus structural-cause condition).

For the attribution of responsibility (H1), the two Likert-type scale items served as separate dependent variables. H1a was supported if participants in the individual-cause condition attributed significantly greater responsibility to the homeless person than those in the structural-cause condition. H1b was supported if participants in the structural-cause condition attributed significantly greater responsibility to external factors than those in the individual-cause condition.

For H2, the composite warmth and competence scores were compared between conditions. H2a was supported if participants in the structural-cause condition rated the homeless person as significantly warmer than those in the individual-cause condition. H2b was supported if participants in the structural-cause condition rated the homeless person as significantly more competent than those in the individual-cause condition.

For the intention to help (H3), the dependent variable was the amount of money donated to the homeless person in the dictator game. H3 was supported if participants in the structural-cause condition donated significantly more money than those in the individual-cause condition.

All analyses were conducted using the software R, version 4.5.1 (R Core Team, 2025). For the data analysis, the packages *tidyverse* (Wickham et al., 2019), *effsize* (Torchiano, 2020) and *psych* (Revelle, 2025) were used.

Results

Preliminary Analyses

For all dependent variables across both conditions, Shapiro-Wilk tests were conducted as assumption checks and showed significant deviations from the normal distribution ($p < .05$). Visual inspection of the Q-Q plots indicated that for H1, deviations were more pronounced in the structural-cause condition, whereas they seemed negligible in the individual-cause condition. For H2a and H2b, the plots of both conditions were acceptable, while for H3, they were concerning (see Appendix E). However, both conditions consisted of more than 30 participants, so the sampling distribution should approximate the standard normal distribution according to the central limit theorem (Kwak & Kim, 2017). Independent-samples *t*-tests should therefore be a valid method for determining group differences. Nevertheless, given the magnitude of the observed deviations in the Shapiro-Wilk tests and the Q-Q plots of H3 and the structural-cause condition of H1, additional nonparametric Wilcoxon rank-sum tests were conducted for all inferential analyses as robustness checks. Table 1 gives an overview of the normality checks and consequent use of Wilcoxon rank-sum tests.

Table 1

Normality checks

Hypothesis	Condition	Shapiro-Wilk test with $p < .05$?	Suspicious Q-Q plot?	Wilcoxon rank-sum test performed?
H1a	Individual-cause	Yes	No	Yes
	Structural-cause	Yes	Yes	
H1b	Individual-cause	Yes	No	Yes
	Structural-cause	Yes	Yes	
H2a	Individual-cause	Yes	No	Yes
	Structural-cause	Yes	No	
H2b	Individual-cause	Yes	No	Yes
	Structural-cause	Yes	No	
H3	Individual-cause	Yes	Yes	Yes
	Structural-cause	Yes	Yes	

H1: Attribution of Responsibility

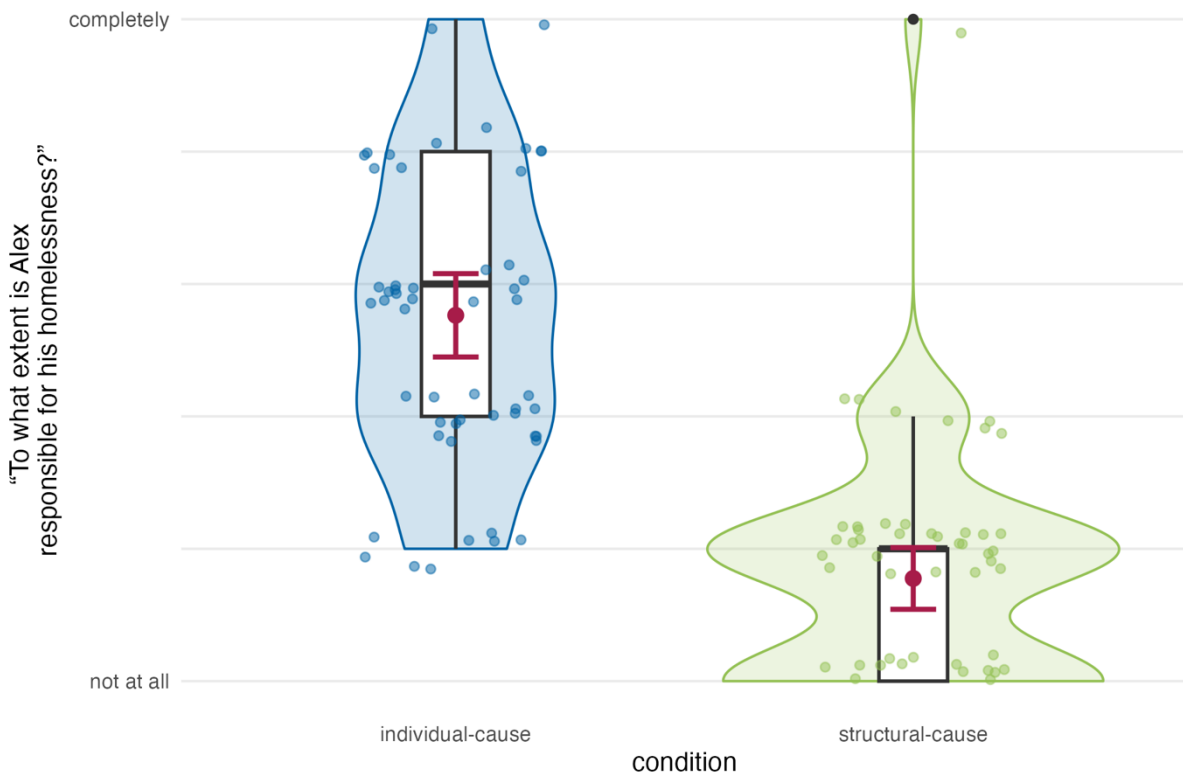
H1a: Responsibility Attributed to the Homeless Individual

Participants in the individual-cause condition assigned more responsibility to the homeless individual ($M = 3.76$, $SD = 1.15$, $Mdn = 4$) than participants in the structural-cause condition ($M = 1.78$, $SD = 0.88$, $Mdn = 2$).

The Welch two sample t -test showed that this difference was statistically significant, $t(100.87) = 10.26$, $p < .001$ (one-sided), 95% $CI [1.67, \infty)$. This was supported by the Wilcoxon test, $W = 2921$, $p < .001$ (one-sided). The effect size was large, with $d = 1.94$, 95% $CI [1.49, 2.40]$. The distribution of responsibility attributions to the homeless individual is illustrated in Figure 1. H1a was therefore supported.

Figure 1

Responsibility attributed to the homeless individual by condition



Note. Violin plots represent the distribution density of responses. Boxplots represent interquartile ranges with the medians shown as horizontal lines. Points show individual observations. Higher values indicate greater perceived responsibility placed on the homeless individual. The central red dot with error bars indicates the estimate for the population mean within its 95%-confidence interval.

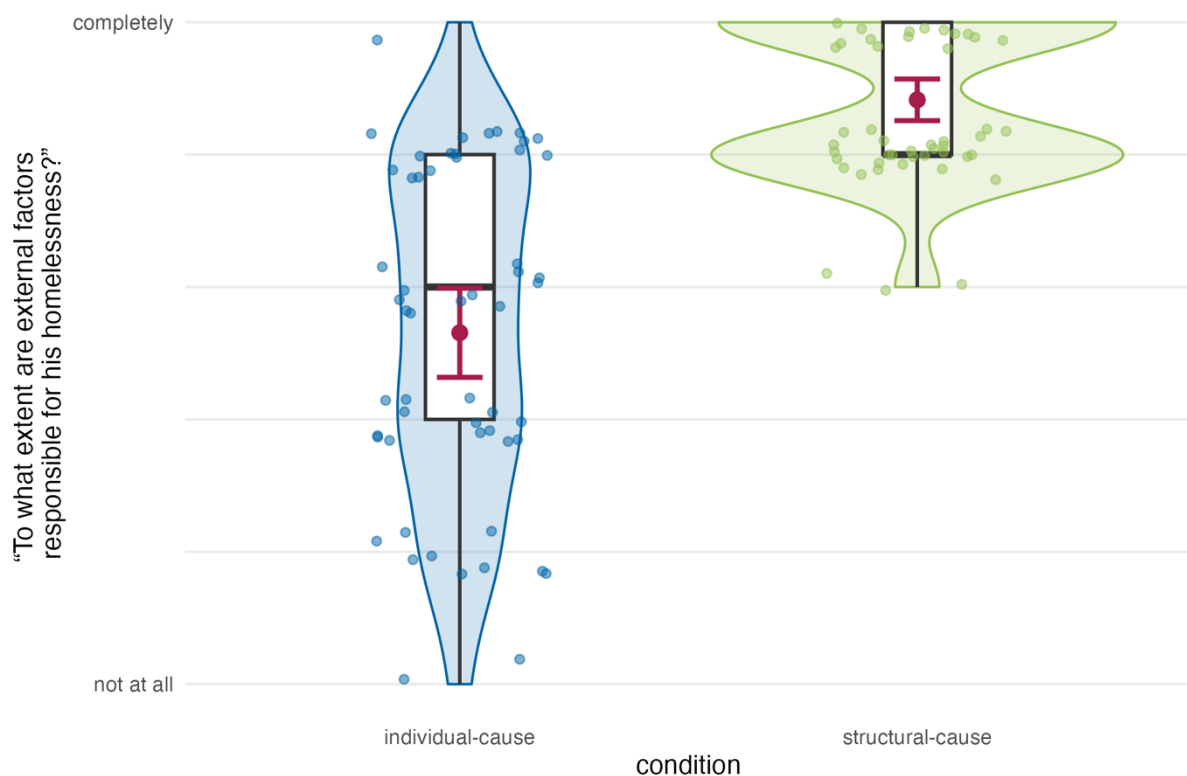
H1b: Responsibility Attributed to External Factors

Participants in the individual-cause condition assigned less responsibility to external factors ($M = 3.65$, $SD = 1.24$, $Mdn = 4$) than participants in the structural-cause condition ($M = 5.41$, $SD = 0.59$, $Mdn = 5$).

The Welch two sample t -test showed that this difference was statistically significant, $t(76.73) = -9.57$, $p < .001$ (one-sided), 95% $CI (-\infty, -1.45]$. This was supported by the Wilcoxon test, $W = 351.5$, $p < .001$ (one-sided). The effect size was large, with $d = -1.83$, 95% $CI [-2.27, -1.39]$. The distribution of responsibility attributions to external factors is illustrated in Figure 2. H1b was therefore supported.

Figure 2

Responsibility attributed to external factors by condition



Note. Violin plots represent the distribution density of responses. Boxplots represent interquartile ranges with the medians shown as horizontal lines. Points show individual observations. Higher values indicate greater perceived responsibility placed on external factors. The central red dot with error bars indicates the estimate for the population mean within its 95%-confidence interval.

H2: Stereotype Content Model with the Dimensions Warmth and Competence

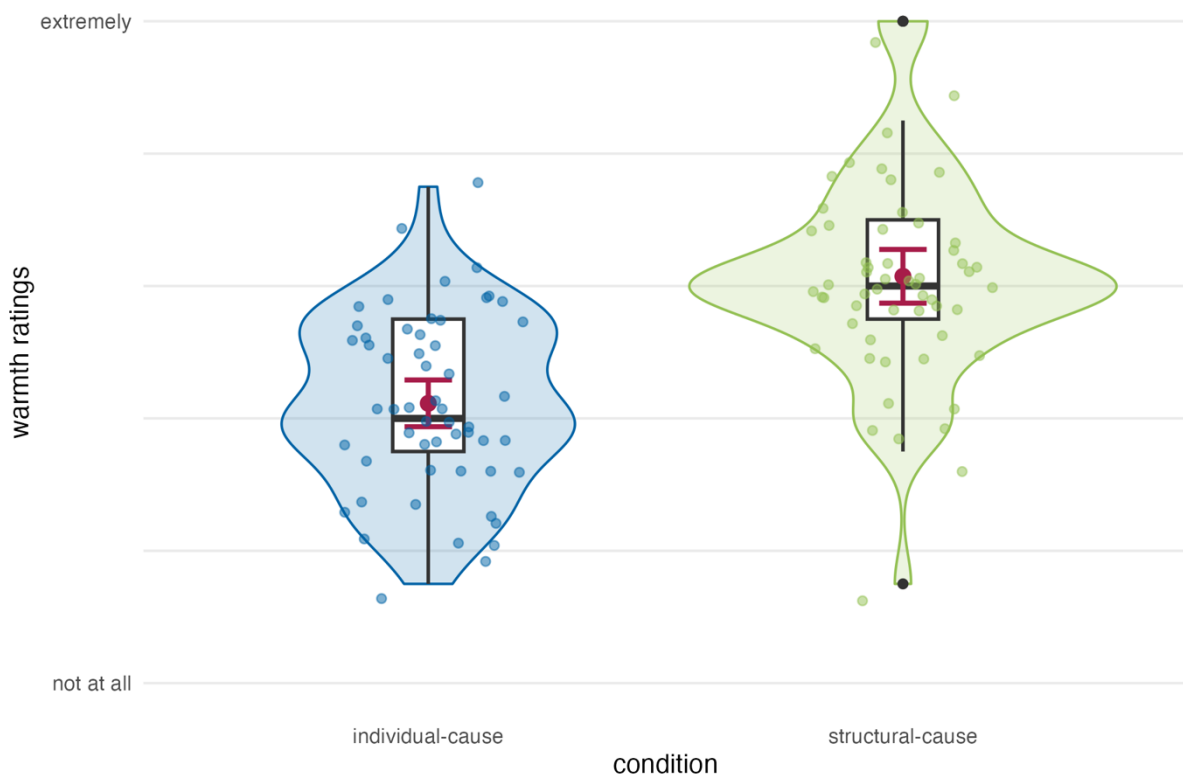
H2a: Warmth Evaluations

Participants in the individual-cause condition assigned lower warmth ratings to the homeless person ($M = 3.11$, $SD = 0.65$, $Mdn = 3$) than participants in the structural-cause condition ($M = 4.07$, $SD = 0.77$, $Mdn = 4$).

The Welch two sample t -test showed that this difference was statistically significant, $t(109.59) = -7.21$, $p < .001$ (one-sided), 95% $CI (-\infty, -0.74]$. This was supported by the Wilcoxon test, $W = 481.5$, $p < .001$ (one-sided). The effect size was large, with $d = -1.35$, 95% $CI [-1.76, -0.94]$. Figure 3 displays the distribution of warmth evaluations. H2a was therefore supported.

Figure 3

Warmth ratings of the homeless person by condition



Note. Violin plots represent the distribution density of responses. Boxplots represent interquartile ranges with the medians shown as horizontal lines. Points show individual observations. Higher values indicate higher warmth ratings. The central red dot with error bars indicates the estimate for the population mean within its 95%-confidence interval.

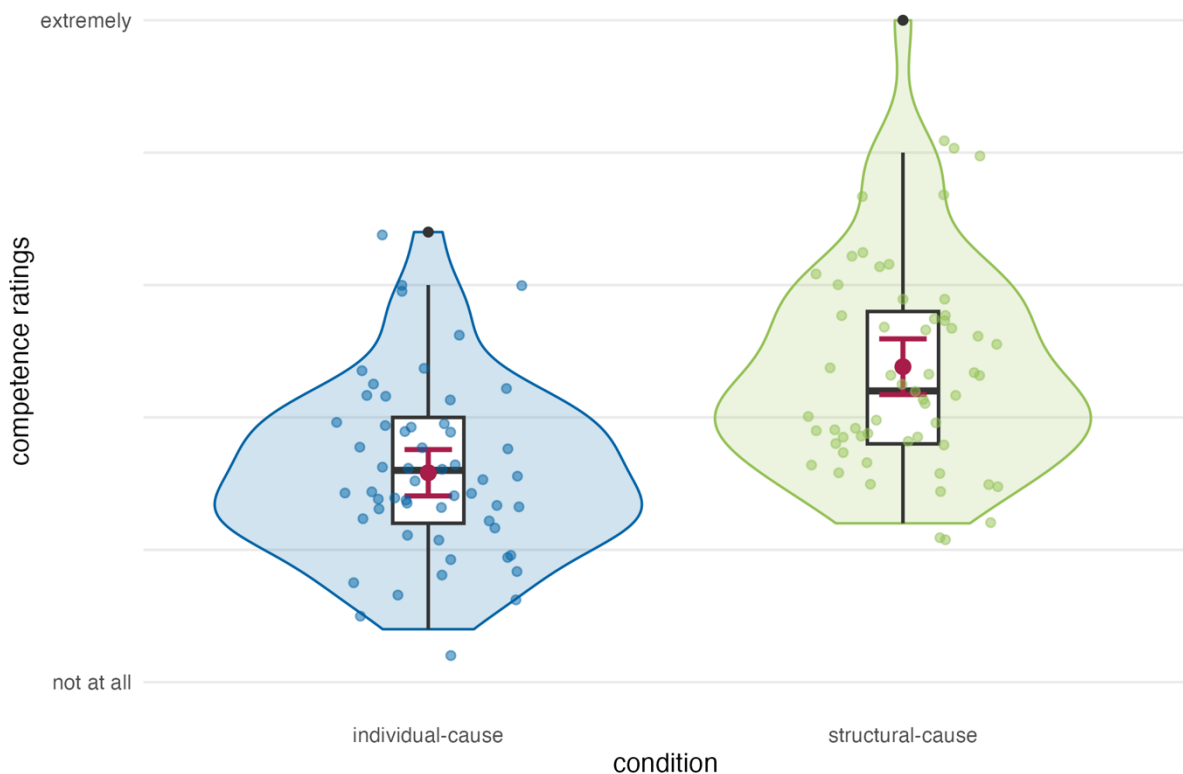
H2b: Competence Evaluations

Participants in the individual-cause condition assigned lower competence ratings to the homeless person ($M = 2.58$, $SD = 0.64$, $Mdn = 2.6$) than participants in the structural-cause condition ($M = 3.38$, $SD = 0.79$, $Mdn = 3.2$).

The Welch two sample t -test showed that this difference was statistically significant, $t(108.37) = -5.91$, $p < .001$ (one-sided), 95% $CI (-\infty, -0.58]$. This was supported by the Wilcoxon test, $W = 669.5$, $p < .001$ (one-sided). The effect size was large, with $d = -1.11$, 95% $CI [-1.51, -0.71]$. Figure 4 displays the distribution of competence evaluations. H2b was therefore supported.

Figure 4

Competence ratings of the homeless person by condition



Note. Violin plots represent the distribution density of responses. Boxplots represent interquartile ranges with the medians shown as horizontal lines. Points show individual observations. Higher values indicate higher competence ratings. The central red dot with error bars indicates the estimate for the population mean within its 95%-confidence interval.

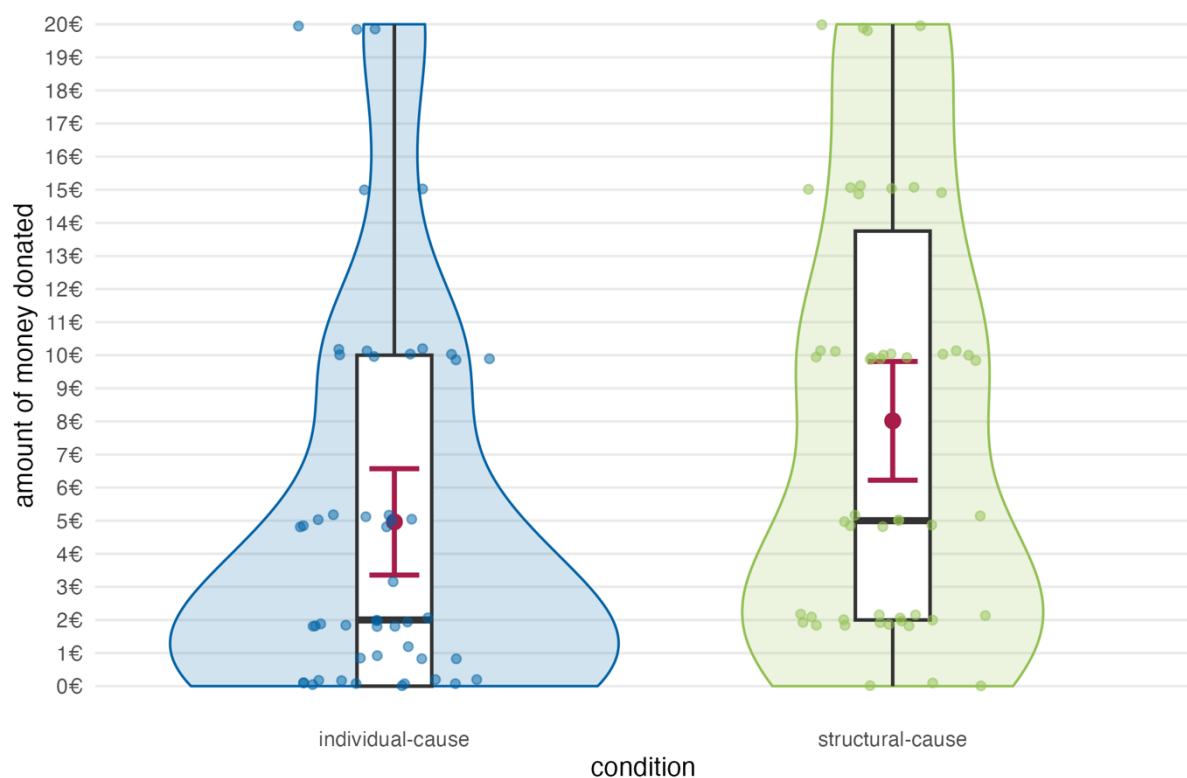
H3: Intention to Help by Donating Money

Participants in the individual-cause condition were willing to donate less of the 20€ prize money to the homeless individual ($M = 4.96$, $SD = 5.89$, $Mdn = 2$) than participants in the structural-cause condition ($M = 8.02$, $SD = 6.76$, $Mdn = 5$).

The Welch two sample t -test showed that this difference was statistically significant, $t(110.22) = -2.56$, $p = .006$ (one-sided), 95% $CI (-\infty, -1.08]$. This was supported by the Wilcoxon test, $W = 1126$, $p = .003$ (one-sided). The effect size was small-to-medium, with $d = -0.48$, 95% $CI [-0.86, -0.10]$. Figure 5 visualizes the distribution of the amount of money donated. H3 was therefore supported.

Figure 5

Intention to help the homeless individual by condition



Note. Violin plots represent the distribution density of responses. Boxplots represent interquartile ranges with the medians shown as horizontal lines. Points show individual observations. Higher values indicate higher monetary donation intentions. The central red dot with error bars indicates the estimate for the population mean within its 95%-confidence interval.

Exploratory Analyses

Percentage-Allocation Item

As outlined in the introduction, exploratory analyses were conducted to examine how participants weigh internal versus external causes, as this information may not be fully captured by the Likert-type responsibility items. To evaluate the relationship between the two operationalizations of responsibility, two linear regression analyses were conducted. They were chosen to assess the extent to which the Likert-type ratings predicted the percentage allocations due to the continuous nature of the percentage scale.

Responsibility attributed to the homeless person significantly predicted the percentage of responsibility allocated to the homeless person, $B = 16.17$, $SE = 0.90$, $t(111) = 17.92$, $p < .001$. The model explained 74% of the variance in the percentage allocation ($R^2 = .74$). Correspondingly, responsibility attributed to external factors significantly predicted the percentage of responsibility allocated to external factors, $B = 17.22$, $SE = 1.06$, $t(111) = 16.21$, $p < .001$. This model accounted for 70% of the variance ($R^2 = .70$).

Descriptive statistics show that participants in the individual-cause condition allocated an average of 52.36% of responsibility to the homeless individual ($SD = 20.36$) and 47.64% to external factors ($SD = 20.36$). Participants in the structural-cause condition allocated an average of 14.79% of responsibility to the homeless individual ($SD = 17.68$) and 85.21% to external factors ($SD = 17.68$).

To examine the differences between the two conditions, Welch two-sample t -tests were conducted. Participants in the individual-cause condition allocated a higher percentage of responsibility to the homeless person ($M = 52.36$, $SD = 20.36$) than participants in the structural-cause condition ($M = 14.79$, $SD = 17.68$), $t(106.99) = 10.45$, $p < .001$, $d = 1.97$. Participants in the individual-cause condition allocated a lower percentage of responsibility to external factors ($M = 47.64$, $SD = 20.36$) than participants in the structural-cause condition ($M = 85.21$, $SD = 17.68$), $t(106.99) = -10.45$, $p < .001$, $d = -1.97$. Wilcoxon rank-sum tests revealed the same pattern.

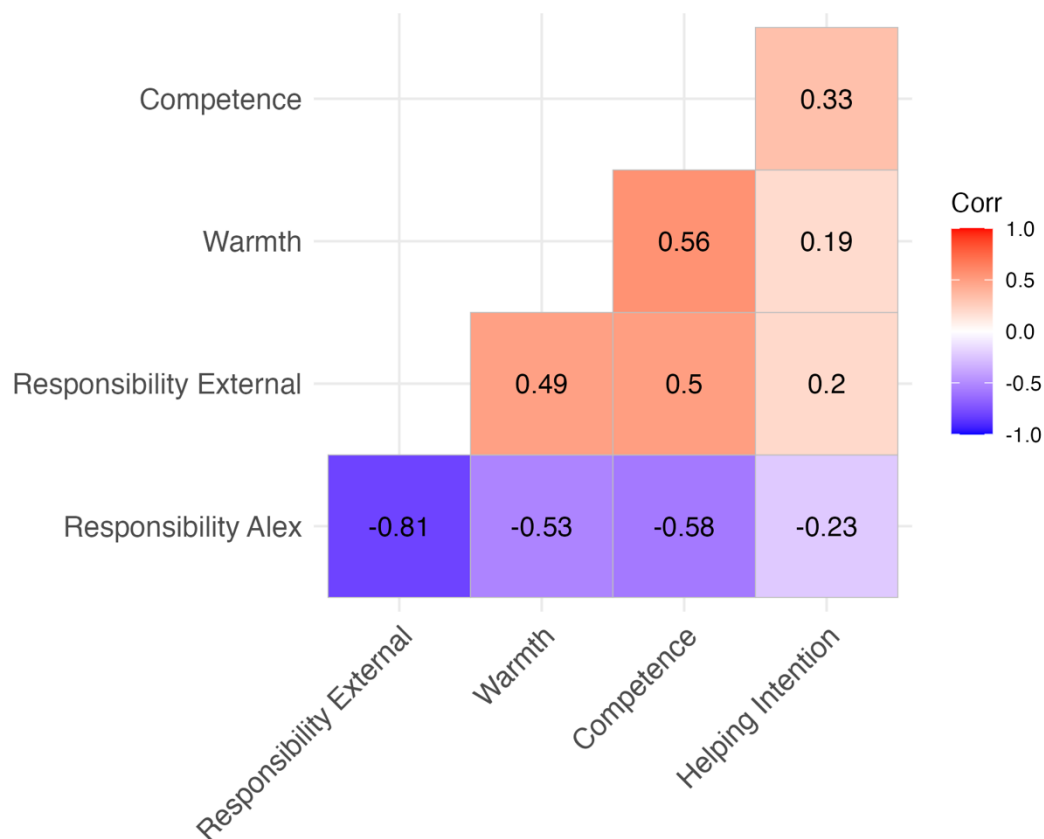
Belief in a Just World as a Moderator

To examine whether the belief in a just world moderated the effects of the causality framing on the outcome variables, a series of linear regression analyses were conducted. For each dependent variable, a model including the main effects of the condition and belief in a just world was first estimated. Then, an interaction term between the condition and belief in a just world was added. Model comparisons were performed using ANOVA to test whether the inclusion of the interaction term significantly improved the model fit.

For the responsibility attributed to the homeless individual, the interaction was not significant, $F(1, 109) = 1.19, p = .278$. Likewise, there was no significant interaction for the responsibility attributed to external factors, $F(1, 109) = 2.49, p = .117$. The interaction between condition and belief in a just world was also not significant for warmth ratings, $F(1, 109) = 0.62, p = .433$, nor for competence ratings, $F(1, 109) = 1.05, p = .308$. For the intention to help, the interaction between condition and belief in a just world was not significant, $F(1, 109) = 3.72, p = .056$, although the effect approached conventional levels of significance. Overall, the belief in a just world did not significantly moderate the effect of the condition on any of the outcome variables.

Correlational Analyses

In order to examine the associations between the dependent variables, exploratory Pearson correlational analyses were conducted. All correlations reached statistical significance (all $p < .001$). As shown in Figure 6, responsibility attributed to the homeless individual was strongly negatively correlated with the responsibility attributed to external factors ($r = -.81$). Responsibility attributed to the homeless individual was also negatively correlated with warmth ratings ($r = -.53$), competence ratings ($r = -.58$) and helping intentions ($r = -.23$). Contrarily, responsibility attributed to external factors was positively correlated with warmth evaluations ($r = .49$), competence evaluations ($r = .50$) and helping intentions ($r = .20$). Perceived warmth and competence were moderately positively correlated ($r = .56$). Warmth ratings were positively associated with helping intentions ($r = .19$), as were competence ratings ($r = .33$). These analyses are exploratory and serve only to illustrate the overall pattern of associations among the dependent variables.

Figure 6*Correlation matrix of the dependent variables*

Note. The values in the cells represent Pearson correlation coefficients across both experimental conditions.

Discussion

The aim of the present study was to examine whether people react differently towards a homeless person depending on if the reasons for their homelessness were individual or structural factors. Specifically, the reactions included the attribution of responsibility, warmth and competence evaluations and the intention to help by donating money. The hypotheses were consistently supported, indicating that causal framing significantly influences how people evaluate and treat a homeless person.

Discussion of H1: Responsibility Attributions

The manipulation successfully shaped the attributions of responsibility in the intended direction. Participants in the individual-cause condition assigned significantly more responsibility to the homeless person than participants in the structural-cause condition (H1a), while participants in the structural-cause condition viewed external factors as more responsible than participants in the individual-cause condition (H1b). This was expected, as

the nature of individual and structural factors, along with the terms ‘individual’ and ‘structural’, already strongly suggest internal and external perceived responsibility.

It is noteworthy that even in the individual-cause condition, the homeless person was attributed an average of 3.76, and external factors were assigned 3.65 out of 6 points of responsibility. The vignette strongly framed the homeless individual as responsible and did not mention any typical structural explanations and yet, the two factors were rated approximately equal in importance. This suggests that people do not fully blame homeless individuals even when individual causes are highlighted. By contrast, in the structural cause condition, while external factors were rated highly responsible ($M = 5.41$), the homeless person was attributed only very little responsibility ($M = 1.78$). This asymmetry suggests that structural factors may serve as a default explanation for understanding homelessness, and that individual factors are weighted heavily only when explicitly mentioned. This contradicts the studies presented earlier reporting that people typically name both structural and individual causes for homelessness. A possible explanation is the political orientation of the sample: Over 86% of participants reported being at least slightly left-leaning politically. In past studies, people with a left-wing political ideology have attributed homelessness more to societal factors, while right-wing respondents believed that the homeless people themselves were more to blame (Markowitz & Syverson, 2021; Pellegrini et al., 1997; Vázquez & Panadero, 2022). It is as such not surprising that the assigned responsibility was consistently skewed towards external factors, irrespective of the condition.

Discussion of H2: Warmth and Competence Evaluations

Next, the vignettes influenced warmth and competence evaluations: Participants rated the homeless person as significantly warmer (H2a) and more competent (H2b) when structural factors contributed to his homelessness. According to the stereotype content model (Fiske et al., 2002), warmth and competence are the core dimensions along which people are evaluated. This means that fundamental character impressions were formed by causal framing. The homeless individual was evaluated as having better intentions (i.e. warmth) and being more able to act on his intentions (i.e. competence).

However, the stereotype content model postulates that homeless people are rated negatively in both dimensions. In the individual-cause condition, the homeless person was rated just below average in warmth ($M = 3.11$) and slightly more negatively in competence ($M = 2.58$). In the structural-cause condition, the homeless person was evaluated just above average in warmth ($M = 4.07$) and just below average in competence ($M = 3.38$). Though there was a tendency towards negative evaluations in the individual-cause condition, the

homeless person was not clearly rated negatively or strongly negatively in either condition or dimension. This contradicts the evident negative rating of homeless people in both dimensions that was hypothesized by Fiske and colleagues (2002). A possible reason for this might also be the framing of the item instructions. Participants were asked how they personally evaluate the homeless person. In the original study, researchers asked them to rate a target ‘as viewed by society’ and even added that they are not interested in the participants’ personal beliefs (Fiske et al., 2002). Personal warmth and competence evaluations have been shown to be less negative than presumed societal ratings (Kotzur et al., 2020), which may explain the relatively neutral assessment of the homeless person in the present study. Moreover, the political affiliation of the sample may have skewed the results, as left-wing people are more likely to hold positive attitudes toward homeless people (Markowitz & Syverson, 2021; Vázquez & Panadero, 2022). The left-leaning political orientation of the large majority of the sample may explain why the warmth and competence evaluations were more favorable than expected by the stereotype content model.

Nevertheless, the data showed that the homeless person was believed to be warmer and more competent in the structural-cause condition as opposed to the individual-cause condition. Apparently, high perceived responsibility for his homelessness caused the homeless individual to be degraded, while structural causes resulted in neutral character impressions. Again, this contradicts the negative rating of homeless people collectively that was hypothesized by the stereotype content model. These different ratings depending on causality framing rather provide first support for the attribution theory by Weiner (1980): The attribution of responsibility on internal factors was associated with more negative evaluations. This should, as a result, negatively affect helping intentions, which is precisely what the results confirmed.

Discussion of H3: Helping Intentions

Behavioral intentions, specifically the intention to help by donating money, were also influenced by the causal framing. Participants in the structural-cause condition donated significantly more money to the homeless person than participants in the individual-cause condition (H3). Though the effect size was smaller than for the other outcomes ($d = -0.48$), the difference remained statistically significant and consistent with theoretical expectations.

These results provide strong support for the attribution-affect-action theory’s proposal that perceived responsibility is a key determinant of subsequent behavioral responses (Weiner, 1980): When participants read that the homeless person’s homelessness resulted from his own behavior and life choices, they perceived him as more responsible and were less

willing to donate money. When they read that structural circumstances such as economic shortages and housing costs were to blame, responsibility was assigned to external conditions and the homeless individual was donated more money. This present study did not measure the participants' emotional reactions to the homeless person, which represents a mediating role according to the theory. The whole chain of effects involved in the attribution-affect-action theory could therefore not yet be supported concerning homeless individuals.

Discussion of Exploratory Analyses

Percentage-Allocation Item

The percentage-allocation item revealed the same statistically significant pattern as the Likert-type items did, providing further support for the success of the experimental manipulation. The Likert-type ratings strongly predicted the percentage allocations ($R^2 = .74$ in the individual-cause condition; $R^2 = .70$ in the structural-cause condition). This indicates that both operationalizations measured the same underlying construct. Although the percentage-allocation item did not provide new information, it may offer a more intuitive representation of responsibility distribution in comparison to a number on a 6-point scale: In the individual-cause condition, participants assigned approximately 52% of responsibility to the homeless person and the remaining 48% to external factors. Participants in the structural-cause condition allocated only 15% of responsibility to the homeless person and 85% to external factors. This more clearly visualizes the roughly equal responsibility attribution when the person's homelessness was described as resulting from individual factors.

Belief in a Just World as a Moderator

The belief in a just world did not significantly moderate the effect of causal framing on any of the dependent variables. The interaction approached significance only when it came to helping intentions ($p = .056$). This null result is interesting, as it contradicts prior research in which the belief in a just world did affect helping intentions: It either motivated helping to remove suffering (Bierhoff et al., 1991; Igou et al., 2021; Zuckerman, 1975) or increased victim blaming and reduced helping (Appelbaum et al., 2006; Kogut, 2011). The literature does not agree in which direction helping intentions are really swayed, and the present study was not able to resolve this conflict. The sample size was calculated only to detect the main effects, so insufficient power to detect interaction effects may be the reason for this null effect. Future studies with larger samples are needed to more confidently accept or reject any presumed moderation.

The null finding is nevertheless meaningful, as it shows that causal explanations for homelessness influenced social judgements irrespective of the participants' belief in a just

world. The effect of causal framing therefore reflects a more general psychological process instead of a byproduct of stable individual differences in just world beliefs.

Correlational Analysis

The exploratory correlational analysis revealed the strength of the associations between the dependent variables. Responsibility attributed to the homeless person was negatively correlated with warmth ($r = -.53$) and competence ($r = -.58$) ratings and the amount of money donated ($r = -.23$), while responsibility attributed to external factors reversed this pattern, correlating positively with warmth ($r = .49$) and competence ($r = .5$) ratings and helping intentions ($r = .2$). This suggests that responsibility attributions may be the core factor affecting social evaluations and behavioral responses: How people explain homelessness appears to shape both fundamental character impressions of the homeless individual and the willingness to help them.

The positive correlation between warmth and helping intentions ($r = .19$) is consistent with the BIAS map by Cuddy and colleagues (2007), which argues that warmth evaluations drive active helping behavior. Although the correlation was modest, it corresponds to the theoretical prediction that perceiving someone as warm increases assistance. Competence ratings were also positively correlated with helping intentions ($r = .33$). This finding suggests that perceived competence may additionally motivate helping intentions, perhaps because a capable person is expected to reasonably use the money received. This competence-helping association being stronger than the warmth-helping connection is somewhat unexpected from the perspective of the BIAS map: The BIAS map rather predicts that competence evaluations affect passive, not active, behavioral responses, while donating money classifies as an active helping behavior. Alternatively, this finding may result from the strong correlation between warmth and competence ($r = .56$), which makes an interpretation of the independent associations difficult.

The cross-sectional and correlational nature of these analyses does not allow any causal interpretations. They nevertheless offer preliminary support for the theoretical chains proposed by both the attribution-affect-action theory and the stereotype content model framework.

Broader Societal Relevance

Previous studies have already shown that the intention to help homeless people decreases when the causes for their situation are perceived as controllable. However, these studies examined attitudes toward homeless people as a group. This is relevant with regard to the support for public policies and donations to charity. Nonetheless, these behaviors are

made quite infrequently. In fact, people up to 25 years of age, which make up over 80% of this study's participants, are less likely to take part in elections (Ellison et al., 2020; Fieldhouse et al., 2007). Additionally, the more frequent elections take place, the lower the participation rate (Briatte et al., 2024; Kostelka et al., 2023), again highlighting the relevance of studying behaviors other than voting decisions.

This present study extends previous literature and contributes to closing the research gap by demonstrating that similar patterns exist for specific individuals. This is highly relevant on a day-to-day basis, as people come in contact with homeless individuals in public spaces frequently, whether it is simply when passing by or being approached by them asking for spare change. Understanding what psychological mechanisms shape these encounters is important, not only concerning the generosity in monetary donations. Already micro-visual encounters, i.e. small and mundane moments, create the experience of stigma and social exclusion for homeless people, especially when they accumulate across time (Bower et al., 2018; Haynes, 2025; Tate et al., 2022). This stigma is so apparent that homeless people actively try to blend in and conceal their homelessness in order to prevent negative responses (Donley & Jackson, 2014). The findings of the present study suggest that causal framing of homelessness shapes the quality of the interaction: If homelessness is understood through a structural lens, homeless individuals may be met with a more humanizing and warm response, which may ultimately affect their feeling of social inclusion. The causal framing of homelessness is therefore highly societally relevant, as these narratives ultimately impact the fleeting yet consequential moments of the daily lives of homeless people.

Applicability of Vignettes to Real-World Situations

In the present study, participants were provided with a vignette explicitly stating the pathway that led to the individual's homelessness. In real-life, however, there is rarely such clear causal information. Nevertheless, even brief encounters with people experiencing homelessness trigger judgements among passersby: Homeless people are perceived as less deserving of help depending on the cleanliness of their appearance (Lankenau, 1999) or whether they use cardboard signs, and what message is written on these signs (Boster et al., 2016; Gross & Wronski, 2021). In fact, signs may portray similar information as the vignettes used, just less detailed: Phrases such as 'bank foreclosed on me' (Gross & Wronski, 2021) or 'very embarrassed but I lost my job' (Boster et al., 2016) likewise suggest structural and individual explanations for homelessness. Other observable behaviors such as alcohol consumption may additionally lead to causal assumptions. As such, the experimental

manipulation of the present study is consistent with the attribution-shaping cues that people are confronted with in everyday encounters with homeless individuals.

These personal interactions do not cause responsibility assumptions on their own. Media coverage of homelessness plays a fundamental role on how homelessness is evaluated. Several researchers have analyzed how media portray and discuss homelessness and found that it is consistently framed as an individual failing, while structural explanations are largely neglected (Best, 2010; Meert et al., 2004; Pruitt et al., 2020; Roberts & Steinkopf, 2022; Sangiuliano et al., 2025). This is even the case for the photographs used, which depict homelessness in a dehumanizing way: They avoid eye contact and the identification by name in the captions, and focus on material items such as tents rather than structural issues (Bowen & Capozziello, 2024). This framing in the media is associated with public attitudes towards homelessness (Irudayaraj et al., 2025; Iyengar, 1987).

This matters because passersby do not encounter homeless individuals with a blank slate. They are already primed by media narratives and situational cues. The vignette methodology used in this study can be understood as experimentally controlling this process. The causal information explicitly presented in the vignettes mirrors and systematically varies the frames used in the media and the contextual signals salient in direct personal encounters. The study therefore does not overestimate the amount of causal information provided; it simply controls and compresses the multiple sources of such information into a single stimulus.

Limitations

Several limitations need to be considered when interpreting the results of this study. First, the sample consisted of a relatively homogenous group. Participants were recruited via personal contacts and psychology student WhatsApp groups, resulting in a convenience sample not representative of the general population. Over 80% of participants were under the age of 26, over 98% had completed at least a high school education and the majority were currently students, and over 86% reported being left-leaning on the political spectrum. This means that the sample was very young, highly educated and oriented quite left politically. These characteristics may influence responsibility attributions, evaluations of homeless individuals and helping intentions. Especially the political orientation seems to be a strong predictor of causal attributions and the willingness to help homeless people (Pellegrini et al., 1997; Vázquez & Panadero, 2022). A more demographically and politically diverse sample might therefore lead to less favorable attributions and evaluations of the target person and his homelessness and weaker helping intentions than the current sample.

The vignettes were divided into describing either individual or structural causes. Though this clean separation was necessary for experimental control, homelessness usually results from a combination of both types of causes. Real-world complexity was not accurately portrayed, leading to a reduced ecological validity of the findings. Only emphasizing one of the two typical causes may have induced stronger attitudes towards the homeless person: i.e. attitudes being more negative in the individual-cause condition and more positive in the structural-cause condition.

Similarly, Alex as the single male target limits the generalizability of the findings. Although the vignettes only specify that the homeless person is male, this still does not accurately reflect the diversity of individuals experiencing homelessness. They vary in age, gender, ethnicity and the circumstances leading to their homelessness, among others. It is unlikely that the attitudes and behaviors observed towards Alex generalize to other demographic profiles. Research suggests, for instance, that the ethnicity (Gross & Wronski, 2021; Markowitz & Syverson, 2021), age (Kane et al., 2010) and gender (Kane et al., 2010; Markowitz & Syverson, 2021) of homeless individuals influence the attitudes towards them. The validity of the findings is therefore constricted to a simplified representation of homeless people.

The experiment did not investigate real monetary contributions but instead focused on the intention to donate money. This is generally acceptable because intentions are the strongest predictors of real behaviors (Rossetto et al., 2016; Sheeran, 2002). Nevertheless, the dictator game remained hypothetical, which may have led to higher donation amounts. This so called hypothetical bias has been shown to cause overestimations of donation sizes by a factor of 3 (Bouma & Koetse, 2019; Christie, 2007; List & Gallet, 2001). However, the difference in donation sizes between the individual-cause and structural-cause condition is significant, suggesting that the effect of the causal framing remains, even though real-life donations may be smaller in size.

Lastly, the tombola framing was used to make the 20€ ‘readily available’ to the participants. This was a deliberate methodological decision in order to reduce possible effects of the employment and socioeconomic status. However, the amount of money participants were willing to donate may have been inflated even more because such windfall money (i.e. unexpected monetary gain) is oftentimes spent more lightheartedly than earned money (Kuai & Wei, 2026). Thus, socioeconomic and employment differences may have been reduced at the expense of a reduced transferability to donation situations involving effortfully acquired money.

Future Research

The present study identifies several aspects that can be explored in future research. To start, the demographic characteristics of the target homeless person need to be systematically varied. As mentioned earlier, homeless people are perceived differently depending on their gender, age and ethnicity. It is not yet clear whether these characteristics interact with causality attributions to elicit different responses. People also vary according to the circumstances that lead to their homelessness. This study clearly separated the causes into individual and structural factors, which does not reflect real-world experiences. This also needs to be further investigated, as presenting both causes may reduce the effect of framing.

Next, the findings should be replicated using real donation behaviors, beyond their mere intention. Although the dictator game setup mirrors real-life donation situations, the ecological validity may nevertheless be reduced due to the hypotheticality. One possible way would be to give participants the opportunity to donate real money, for instance their financial compensation for participation. However, an even more ecologically valid setup would be conducting a field experiment. The causal information written in the vignettes could instead be communicated through cardboard signs held by a confederate. The subject of investigation would be the observed behavior of passersby. This approach would examine the natural reactions to the encounters with homeless individuals as they occur in real life, but under controlled experimental conditions.

As stated earlier, the present study did not test the emotional reactions towards the homeless person. The attribution-affect-action theory proposes that uncontrollable causes for a need state lead to increased helping via a sympathetic or pitiful emotional reaction. Controllable causes elicit anger, which results in decreased helping (Schmidt & Weiner, 1988). Though the current findings accordingly show that causal attributions shape the intention to help, the mediating emotional reactions were not measured. Future research should examine this regarding the topic of homelessness. Similarly, the stereotype content model suggests that groups viewed as cold and incompetent, such as homeless people, cause contempt. Other warmth and competence profiles are associated with other emotional responses, namely admiration, envy and pity (Fiske et al., 2002). The direct measurement of these emotions is necessary to gain a comprehensive understanding of the models and their validity in the context of homelessness.

Lastly, 108 (95.6%) of the 113 participants reported never having experienced or having been at risk of experiencing homelessness. The perspectives of people with real experiences of being unhoused may substantially differ in how they respond to other

homeless people and the circumstances that led to their situation. Studying this population in the future would not simply expand the characteristics and diversity of people included in the sample. It would also make sure that those individuals that were directly affected in the past or are currently affected by homelessness and the social judgements that come with this experience are represented in academic research.

Conclusion

The present study examined whether a homeless person is evaluated and treated differently depending on the cause of their homelessness. Using two different vignettes, participants read that a man called Alex became homeless due to structural versus individual factors. Across all of the dependent variables, namely responsibility assigned to the homeless individual and external factors, warmth and competence ratings and the intention to help by donating money, the causal framing had a significant effect in the predicted direction: When his homelessness was attributed to his own behavior and choices, participants viewed the homeless individual as more responsible for his need state, less warm and competent, and were less willing to give him money. The opposite was the case when they read that economic shortages and a lack of affordable housing were the primary causes.

The results extend previous research showing that structural attributions increase helping intentions toward homeless people as a group by demonstrating that this pattern holds for specific, identifiable individuals. This is important because people have personal encounters with individuals rather than abstract groups. These seemingly fleeting moments have real consequences for the feeling of social exclusion among the homeless individuals. Understanding how the causal framing of homelessness shapes these personal interactions is therefore highly relevant for the people experiencing it.

The findings should be interpreted keeping several limitations in mind. The sample largely consisted of young, educated and left-leaning participants, which may have led to more favorable attitudes towards the homeless individual. The target person's homelessness was described as resulting from *either* individual *or* structural factors, which does not accurately portray their interaction that is mostly the case. The helping measure remained hypothetical, and the tombola framing may have inflated donation amounts, reducing the ecological validity of this variable in particular. Future research needs to address these limitations by using a more diverse sample, mixed-cause vignettes and designs that capture real-world behavior more realistically.

Taken together, this study contributes to a better understanding of why people react the way they do toward homeless individuals. People encounter causal narratives constantly,

whether through personal encounters or media coverage. This then shapes how homeless individuals are evaluated and treated. Promoting structural rather than individual explanations may therefore encourage warmer and more supportive responses.

References

- Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational Research Methods, 17*(4), 351–371. <https://doi.org/10.1177/1094428114547952>
- Alexander, C. S., & Becker, H. J. (1978). The use of vignettes in survey research. *Public Opinion Quarterly, 42*(1), 93–104. <https://doi.org/10.1086/268432>
- Alowaimer, O. (2018). Causes, effects and issues of homeless people. *Journal of Socialomics, 07*(03). <https://doi.org/10.4172/2167-0358.1000223>
- Appelbaum, L. D., Lennon, M. C., & Lawrence Aber, J. (2006). When effort is threatening: The influence of the belief in a just world on Americans' attitudes toward antipoverty policy. *Political Psychology, 27*(3), 387–402. <https://doi.org/10.1111/j.1467-9221.2006.00506.x>
- Badahdah, A. M., & Alkhder, O. H. (2006). Helping a friend with AIDS: A test of Weiner's attributional theory in Kuwait. *Illness, Crisis & Loss, 14*(1), 43–54. <https://doi.org/10.1177/105413730601400103>
- Bandhu, D., Mohan, M. M., Nittala, N. A. P., Jadhav, P., Bhadauria, A., & Saxena, K. K. (2024). Theories of motivation: A comprehensive analysis of human behavior drivers. *Acta Psychologica, 244*, 104177. <https://doi.org/10.1016/j.actpsy.2024.104177>
- Barr, A., & Zeitlin, A. (2010). Dictator games in the lab and in nature: External validity tested and investigated in Ugandan primary schools. *CSAE Working Paper Series, CSAE Working Paper Series*, Article 2010–11. <https://ideas.repec.org/p/csa/wpaper/2010-11.html>
- Batterham, D. (2020). *Public perceptions of homelessness – A literature review*. Launch Housing.
- Benz, M., & Meier, S. (2008). Do people behave in experiments as in the field? - Evidence from donations. *Experimental Economics, 11*(3), 268–281. <https://doi.org/10.1007/s10683-007-9192-y>
- Best, R. (2010). Situation or social problem: The influence of events on media coverage of homelessness. *Social Problems, 57*(1), 74–91. <https://doi.org/10.1525/sp.2010.57.1.74>
- Bierhoff, H. W., Klein, R., & Kramp, P. (1991). Evidence for the altruistic personality from data on accident research. *Journal of Personality, 59*(2), 263–280. <https://doi.org/10.1111/j.1467-6494.1991.tb00776.x>
- Boster, F. J., Liu, R. W., Poorisat, T., Cheng, Y., Kim, W., Salmon-Seidmann, N. D., & Salmon, C. T. (2016). Communicating to influence perceptions of social stigma:

- Implications for the use of signs by the homeless as a means of soliciting funds. *American Behavioral Scientist*, 60(11), 1293–1305.
<https://doi.org/10.1177/0002764216657379>
- Bouma, J. A., & Koetse, M. J. (2019). Mind the gap: Stated versus revealed donations and the differential role of behavioral factors. *Land Economics*, 95(2), 225–245.
<https://doi.org/10.3368/le.95.2.225>
- Bowen, E. A., & Capozziello, N. (2024). Faceless, nameless, invisible: A visual content analysis of photographs in U.S. media coverage about homelessness. *Housing Studies*, 39(3), 746–765. <https://doi.org/10.1080/02673037.2022.2084044>
- Bower, M., Conroy, E., & Perz, J. (2018). Australian homeless persons' experiences of social connectedness, isolation and loneliness. *Health & Social Care in the Community*, 26(2), e241–e248. <https://doi.org/10.1111/hsc.12505>
- Bramley, G., & Fitzpatrick, S. (2018). Homelessness in the UK: Who is most at risk? *Housing Studies*, 33(1), 96–116. <https://doi.org/10.1080/02673037.2017.1344957>
- Briatte, F., Kelbel, C., & Navarro, J. (2024). Do (too many) elections depress participation? How the position, frequency and nature of domestic ballots affect turnout in European Parliament elections. *European Union Politics*, 25(3), 549–568.
<https://doi.org/10.1177/14651165241257779>
- Brisson, D. (2025). Homelessness is a housing problem: How structural factors explain U.S. Patterns: by Colburn, G. & Aldern, C. P, Oakland, CA, University of California Press, 2022, 284 pp. \$29.95 (paperback). ISBN 9780520383784. *Housing and Society*, 52(2), 230–232. <https://doi.org/10.1080/08882746.2024.2363569>
- Brun, L., Pansu, P., & Dompnier, B. (2021). The role of causal attributions in determining behavioral consequences: A meta-analysis from an intrapersonal attributional perspective in achievement contexts. *Psychological Bulletin*, 147(7), 701–718.
<https://doi.org/10.1037/bul0000331>
- Bulman, R. J., & Wortman, C. B. (1977). Attributions of blame and coping in the “real world”: Severe accident victims react to their lot. *Journal of Personality and Social Psychology*, 35(5), 351–363. <https://doi.org/10.1037/0022-3514.35.5.351>
- Bundesministerium für Arbeit, Soziales, Gesundheit, Pflege und Konsumentenschutz. (2025, November 20). *Wohnen*.
<https://www.sozialministerium.gv.at/Themen/Soziales/Soziale-Themen/wohnungssicherung.html>

- Byrne, T., Munley, E. A., Fargo, J. D., Montgomery, A. E., & Culhane, D. P. (2013). New perspectives on community-level determinants of homelessness. *Journal of Urban Affairs*, 35(5), 607–625. <https://doi.org/10.1111/j.1467-9906.2012.00643.x>
- Campbell, D., Carr, S. C., & Maclachlan, M. (2001). Attributing “third world poverty” in Australia and Malawi: A case of donor bias? *Journal of Applied Social Psychology*, 31(2), 409–430. <https://doi.org/10.1111/j.1559-1816.2001.tb00203.x>
- Caprariello, P. A., Cuddy, A., & Fiske, S. T. (2009). Social structure shapes cultural stereotypes and emotions: A causal test of the stereotype content model. *Group Processes & Intergroup Relations*, 12(2), 147–155. <https://doi.org/10.1177/1368430208101053>
- Charbonnier, M., & Coupechoux, S. (2025). *Tenth overview of housing exclusion in Europe*. FEANTSA (European Federation of National Organisations Working with the Homeless). https://www.feantsa.org/files/Themes/Overview/2025/Rapport_Europe_2025_EN4.pdf
- Choi, J., Kim, M., Hong, Y., & Kim, B. (2025). *A stereotype content analysis on color-related social bias in large vision language models* (arXiv:2505.20901). arXiv. <https://doi.org/10.48550/arXiv.2505.20901>
- Christie, M. (2007). An examination of the disparity between hypothetical and actual willingness to pay using the contingent valuation method: The case of red kite conservation in the United Kingdom. *Canadian Journal of Agricultural Economics/Revue Canadienne d'agroeconomie*, 55(2), 159–169. <https://doi.org/10.1111/j.1744-7976.2007.00085.x>
- Clifford, S., & Piston, S. (2017). Explaining public support for counterproductive homelessness policy: The role of disgust. *Political Behavior*, 39(2), 503–525. <https://doi.org/10.1007/s11109-016-9366-4>
- Cortes, G. L. (2024). A systematic literature review of the stereotype content model in the fields of psychology and marketing: Main themes examined in the literature and an agenda for future research in marketing. *Frontiers in Psychology*, 15, 1392629. <https://doi.org/10.3389/fpsyg.2024.1392629>
- Cuddy, A., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, 92(4), 631–648. <https://doi.org/10.1037/0022-3514.92.4.631>

- Cuddy, A., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. In *Advances in Experimental Social Psychology* (Vol. 40, pp. 61–149). Academic Press.
[https://doi.org/10.1016/S0065-2601\(07\)00002-0](https://doi.org/10.1016/S0065-2601(07)00002-0)
- Cuddy, A., Fiske, S. T., Kwan, V., Glick, P., Demoulin, S., Leyens, J.-P., Bond, M., Croizet, J.-C., Ellemers, N., Sleebos, E., Htun, T., Kim, H. J., Maio, G., Perry, J., Petkova, K., Todorov, V., Rodríguez-Bailón, R., Morales, E., Moya, M., & Ziegler, R. (2009). Stereotype content model across cultures: Towards universal similarities and some differences. *The British Journal of Social Psychology / the British Psychological Society*, 48, 1–33. <https://doi.org/10.1348/014466608X314935>
- Czaderny, K. (2020). Risk factors for homelessness: A structural equation approach. *Journal of Community Psychology*, 48(5), 1381–1394. <https://doi.org/10.1002/jcop.22332>
- Dalbert, C. (2009). Belief in a just world. In *Handbook of individual differences in social behavior* (pp. 288–297). The Guilford Press.
- DeMotta, Y. (2021). Dialectical thinking as a driver of charitable giving. *Psychology & Marketing*, 38(9), 1404–1416. <https://doi.org/10.1002/mar.21526>
- Donley, A., & Jackson, E. (2014). Blending in: The presentation of self among homeless men in a gentrifying environment. *Theory in Action*, 7, 46–64.
<https://doi.org/10.3798/tia.1937-0237.14003>
- Elliott, M., & Krivo, L. J. (1991). Structural determinants of homelessness in the United States. *Social Problems*, 38(1), 113–131. <https://doi.org/10.2307/800641>
- Ellison, M., Pollock, G., & Grimm, R. (2020). Young people’s orientations towards contemporary politics: Trust, representation and participation. *Zeitschrift Für Erziehungswissenschaft*, 23(6), 1201–1226. <https://doi.org/10.1007/s11618-020-00984-4>
- Farha, L. (2015). *Report on homelessness as a global human rights crisis* (A/HRC/31/54). Office of the High Commissioner for Human Rights. <https://www.ohchr.org/en/calls-for-input/report-homelessness-global-human-rights-crisis>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. <https://doi.org/10.3758/BRM.41.4.1149>
- FEANTSA. (2005). *ETHOS: European Typology of Homelessness and Housing Exclusion*. <https://www.feantsa.org/ethos>

- FeldmanHall, O., & Shenhav, A. (2019). Resolving uncertainty in a social world. *Nature Human Behaviour*, 3(5), 426–435. <https://doi.org/10.1038/s41562-019-0590-x>
- Fieldhouse, E., Tranmer, M., & Russell, A. (2007). Something about young people or something about elections? Electoral participation of young people in Europe: Evidence from a multilevel analysis of the European Social Survey. *European Journal of Political Research*, 46(6), 797–822. <https://doi.org/10.1111/j.1475-6765.2007.00713.x>
- Fiske, S. T. (1993). Social cognition and social perception. *Annual Review of Psychology*, 44(Volume 44, 1993), 155–194. <https://doi.org/10.1146/annurev.ps.44.020193.001103>
- Fiske, S. T. (2018). Stereotype content: Warmth and competence endure. *Current Directions in Psychological Science*, 27(2), 67–73. <https://doi.org/10.1177/0963721417738825>
- Fiske, S. T., Cuddy, A., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878–902. <https://doi.org/10.1037/0022-3514.82.6.878>
- Fitzpatrick, S. (2005). Explaining homelessness: A critical realist perspective. *Housing, Theory and Society*, 22(1), 1–17. <https://doi.org/10.1080/14036090510034563>
- Fowle, M. Z. (2022). Racialized homelessness: A review of historical and contemporary causes of racial disparities in homelessness. *Housing Policy Debate*, 32(6), 940–967. <https://doi.org/10.1080/10511482.2022.2026995>
- Franzen, A., & Pointner, S. (2013). The external validity of giving in the dictator game: A field experiment using the misdirected letter technique. *Experimental Economics*, 16. <https://doi.org/10.1007/s10683-012-9337-5>
- Giano, Z., Williams, A., Hankey, C., Merrill, R., Lisnic, R., & Herring, A. (2020). Forty years of research on predictors of homelessness. *Community Mental Health Journal*, 56(4), 692–709. <https://doi.org/10.1007/s10597-019-00530-5>
- Graham, S. (2020). An attributional theory of motivation. *Contemporary Educational Psychology*, 61, 101861. <https://doi.org/10.1016/j.cedpsych.2020.101861>
- Greitemeyer, T., & Rudolph, U. (2003). Help giving and aggression from an attributional perspective: Why and when we help or retaliate. *Journal of Applied Social Psychology*, 33(5), 1069–1087. <https://doi.org/10.1111/j.1559-1816.2003.tb01939.x>
- Gross, K., & Wronski, J. (2021). Helping the homeless: The role of empathy, race and deservingness in motivating policy support and charitable giving. *Political Behavior*, 43(2), 585–613. <https://doi.org/10.1007/s11109-019-09562-9>

- Guo, Y., Guo, Q., Liu, Z., & Liu, H. (2022). Moral identity and empathy promote prosocial behavior only toward blameless AIDS patients. *Scandinavian Journal of Psychology*, 63(3), 229–237. <https://doi.org/10.1111/sjop.12786>
- Hafer, C., & Sutton, R. (2016). *Belief in a just world* (pp. 145–160). https://doi.org/10.1007/978-1-4939-3216-0_8
- Hainmueller, J., Hangartner, D., & Yamamoto, T. (2015). Validating vignette and conjoint survey experiments against real-world behavior. *Proceedings of the National Academy of Sciences*, 112(8), 2395–2400. <https://doi.org/10.1073/pnas.1416587112>
- Hanratty, M. (2017). Do local economic conditions affect homelessness? Impact of area housing market factors, unemployment, and poverty on community homeless rates. *Housing Policy Debate*, 27(4), 640–655. <https://doi.org/10.1080/10511482.2017.1282885>
- Hansen, K. J. (2019). Who cares if they need help? The deservingness heuristic, humanitarianism, and welfare opinions. *Political Psychology*, 40(2), 413–430. <https://doi.org/10.1111/pops.12506>
- Hart, T., Bogner, J. A., Whyte, J., & Polansky, M. (2003). Attribution of blame in accidental and violence-related traumatic brain injury. *Rehabilitation Psychology*, 48(2), 86–92. <https://doi.org/10.1037/0090-5550.48.2.86>
- Haynes, W. (2025). Micro-visual encounters with homelessness in an urban railway station. *Social & Cultural Geography*, 1–20. <https://doi.org/10.1080/14649365.2025.2584034>
- Heffron, W. A., Skipper, B. J., & Lambert, L. (1997). Health and lifestyle issues as risk factors for homelessness. *The Journal of the American Board of Family Practice*, 10(1), 6–12.
- Heider, F. (1958). *The psychology of interpersonal relations* (pp. ix, 326). John Wiley & Sons, Inc. <https://doi.org/10.1037/10628-000>
- Heizler, O., & Israeli, O. (2021). The identifiable victim effect and public opinion toward immigration; a natural experiment study. *Journal of Behavioral and Experimental Economics*, 93, 101713. <https://doi.org/10.1016/j.socec.2021.101713>
- Hellman, C. M., Muilenburg-Trevino, E. M., & Worley, J. A. (2008). The belief in a just world: An examination of reliability estimates across three measures. *Journal of Personality Assessment*, 90(4), 399–401. <https://doi.org/10.1080/00223890802108238>
- Hellmann, D. M., Dorrough, A. R., & Glöckner, A. (2021). Prosocial behavior during the COVID-19 pandemic in Germany. The role of responsibility and vulnerability. *Heliyon*, 7(9). <https://doi.org/10.1016/j.heliyon.2021.e08041>

- Heydarian, N. M., Castro, Y., & Morera, O. F. (2022). A brief report examining the stereotype content model with blind Americans. *Rehabilitation Psychology*, 67(2), 231–234. <https://doi.org/10.1037/rep0000435>
- Horvat, N., & Coupechoux, S. (2024). *Ninth overview of housing exclusion in Europe*. FEANTSA (European Federation of National Organisations Working with the Homeless). https://www.feantsa.org/files/Themes/Overview/2024/Rapport_-_EN.pdf
- Hsieh, M.-H., & Yucel-Aybat, O. (2018). Persuasive charity appeals for less and more controllable health causes: The roles of implicit mindsets and benefit frames. *Journal of Advertising*, 47(2), 112–126. <https://doi.org/10.1080/00913367.2017.1402720>
- Igou, E. R., Blake, A. A., & Bless, H. (2021). Just-world beliefs increase helping intentions via meaning and affect. *Journal of Happiness Studies*, 22(5), 2235–2253. <https://doi.org/10.1007/s10902-020-00317-6>
- Irudayaraj, A., Ye, N., & Chainani, Y. (2025). *Shifting narratives: A longitudinal analysis of media trends and public attitudes on homelessness*. https://doi.org/10.31235/osf.io/njzbu_v1
- Iyengar, S. (1987). Television news and citizens' explanations of national affairs. *American Political Science Review*, 81(3), 815–831. <https://doi.org/10.2307/1962678>
- Kane, M. N., Green, D., & Jacobs, R. J. (2010). Perceptions of students about younger and older men and women who may be homeless. *Journal of Social Service Research*, 36(4), 261–277. <https://doi.org/10.1080/01488376.2010.493845>
- Kingree, J. B., & Daves, W. F. (2011). *Attitudes toward homelessness inventory* [Dataset]. <https://doi.org/10.1037/t07509-000>
- Kogut, T. (2011). Someone to blame: When identifying a victim decreases helping. *Journal of Experimental Social Psychology*, 47(4), 748–755. <https://doi.org/10.1016/j.jesp.2011.02.011>
- Kostelka, F., Krejcova, E., Sauger, N., & Wuttke, A. (2023). Election frequency and voter turnout. *Comparative Political Studies*, 56. <https://doi.org/10.1177/00104140231169020>
- Kotzur, P. F., Veit, S., Namyslo, A., Holthausen, M.-A., Wagner, U., & Yemane, R. (2020). 'Society thinks they are cold and/or incompetent, but I do not': Stereotype content ratings depend on instructions and the social group's location in the stereotype content space. *British Journal of Social Psychology*, 59(4), 1018–1042. <https://doi.org/10.1111/bjso.12375>

- Kramarić, M., & Kamenov, Ž. (2025). Should I help? Moderating effects of the collaborative aspect of the helping situation on the attribution-emotion-help relationship. *Scandinavian Journal of Psychology*, 66(6), 930–941.
<https://doi.org/10.1111/sjop.70002>
- Kuai, L., & Wei, H. (2026). It's not my money: How windfall income enhances donation. *Journal of Economic Psychology*, 112, 102871.
<https://doi.org/10.1016/j.joep.2025.102871>
- Kwak, S. G., & Kim, J. H. (2017). Central limit theorem: The cornerstone of modern statistics. *Korean Journal of Anesthesiology*, 70(2), 144–156.
<https://doi.org/10.4097/kjae.2017.70.2.144>
- Labban, A., Novell, C., & Bauer, S. (2023). Examining the impact of mindsets on donation intentions to homelessness charities via parallel serial mediation. *International Review on Public and Nonprofit Marketing*, 20(1), 225–244. <https://doi.org/10.1007/s12208-022-00336-4>
- Lankenau, S. E. (1999). Stronger than dirt: Public humiliation and status enhancement among panhandlers. *Journal of Contemporary Ethnography*, 28(3), 288–318.
<https://doi.org/10.1177/089124199129023451>
- Lee, B. A., Link, B. G., & Toro, P. A. (1991). Images of the homeless: Public views and media messages. *Housing Policy Debate*, 2(3), 649–682.
<https://doi.org/10.1080/10511482.1991.9521068>
- Lee, S., & Feeley, T. H. (2016). The identifiable victim effect: A meta-analytic review. *Social Influence*, 11(3), 199–215. <https://doi.org/10.1080/15534510.2016.1216891>
- Leiner, D. J. (2024). *SoSci Survey (Version 3.5.02) [Computer software]*.
<https://www.soscisurvey.de/>
- Lerner, M. J. (1980a). The belief in a just world. In M. J. Lerner (Ed.), *The Belief in a Just World: A Fundamental Delusion* (pp. 9–30). Springer US.
https://doi.org/10.1007/978-1-4899-0448-5_2
- Lerner, M. J. (1980b). The third experiment. In M. J. Lerner (Ed.), *The Belief in a Just World: A Fundamental Delusion* (pp. 55–61). Springer US. https://doi.org/10.1007/978-1-4899-0448-5_5
- Lerner, M. J., & Miller, D. T. (1978). Just world research and the attribution process: Looking back and ahead. *Psychological Bulletin*, 85(5), 1030–1051.
<https://doi.org/10.1037/0033-2909.85.5.1030>

- Lerner, M. J., & Simmons, C. H. (1966). Observer's reaction to the "innocent victim": Compassion or rejection? *Journal of Personality and Social Psychology*, 4(2), 203–210. <https://doi.org/10.1037/h0023562>
- Link, B. G., Schwartz, S., Moore, R., Phelan, J., Struening, E., Stueve, A., & Colten, M. E. (1995). Public knowledge, attitudes, and beliefs about homeless people: Evidence for compassion fatigue. *American Journal of Community Psychology*, 23(4), 533–555. <https://doi.org/10.1007/BF02506967>
- Lipkus, I. (1991). The construction and preliminary validation of a global belief in a just world scale and the exploratory analysis of the multidimensional belief in a just world scale. *Personality and Individual Differences*, 12(11), 1171–1178. [https://doi.org/10.1016/0191-8869\(91\)90081-L](https://doi.org/10.1016/0191-8869(91)90081-L)
- List, J., & Gallet, C. (2001). What experimental protocol influence disparities between actual and hypothetical stated values? *Environmental & Resource Economics*, 20(3), 241–254. <https://doi.org/10.1023/A:1012791822804>
- Ljubotina, O., Kletecki Radovic, M., & Ogresta, J. (2022). Determinants of causal attributions of homelessness in Croatia. *Revija Za Socijalnu Politiku*, 29, 163–190. <https://doi.org/10.3935/rsp.v29i2.1972>
- Lobchuk, M., McClement, S., McPherson, C., & Cheang, M. (2008). Does blaming the patient with lung cancer affect the helping behavior of primary caregivers? *Oncology Nursing Forum*, 35, 681–689. <https://doi.org/10.1188/08.ONF.681-689>
- Mabhala, M. A., Yohannes, A., & Griffith, M. (2017). Social conditions of becoming homelessness: Qualitative analysis of life stories of homeless peoples. *International Journal for Equity in Health*, 16(1), 150. <https://doi.org/10.1186/s12939-017-0646-3>
- Main, T. (1998). How to think about homelessness: Balancing structural and individual causes. *Journal of Social Distress and the Homeless*, 7, 41–54. <https://doi.org/10.1023/A:1022966631533>
- Malle, B. F. (2011). Attribution theories: How people make sense of behavior. In *Theories in social psychology* (pp. 72–95). Wiley Blackwell. <https://doi.org/10.1002/9781394266616.ch4>
- Manusov, V., & Spitzberg, B. (2008). Attribution theory: Finding good cause in the search for theory. In L. Baxter & D. Braithwaite, *Engaging Theories in Interpersonal Communication: Multiple Perspectives* (pp. 37–50). SAGE Publications, Inc. <https://doi.org/10.4135/9781483329529.n3>

- Marinucci, M., Riva, P., Lenzi, M., Lasagna, C., Waldeck, D., Tyndall, I., & Volpato, C. (2023). On the lowest rung of the ladder: How social exclusion, perceived economic inequality and stigma increase homeless people's resignation. *British Journal of Social Psychology*, 62(4), 1817–1838. <https://doi.org/10.1111/bjso.12657>
- Markowitz, F. E., & Syverson, J. (2021). Race, gender, and homelessness stigma: Effects of perceived blameworthiness and dangerousness. *Deviant Behavior*, 42(7), 919–931. <https://doi.org/10.1080/01639625.2019.1706140>
- Meert, H., Cabrera, P., Christensen, I., Koch-Nielsen, I., Maas, R., & Maurel, E. (2004). *The changing profiles of homeless people: Homelessness in the Written Press: A Discourse Analysis*.
- Meyer, J. P., & Mulherin, A. (1980). From attribution to helping: An analysis of the mediating effects of affect and expectancy. *Journal of Personality and Social Psychology*, 39(2), 201–210. <https://doi.org/10.1037/0022-3514.39.2.201>
- Mikula, Z. (2025). In the shadow of social inequality: Homelessness. *Fórum Társadalomtudományi Szemle*, XXVII, 107–126. <https://doi.org/10.61795/fssr.v27y2025i5.06>
- Mize, T. D., & Manago, B. (2018). The stereotype content of sexual orientation. *Social Currents*, 5(5), 458–478. <https://doi.org/10.1177/2329496518761999>
- Montada, L. (1998). Belief in a just world: A hybrid of justice motive and self-interest? In L. Montada & M. J. Lerner (Eds.), *Responses to Victimizations and Belief in a Just World* (pp. 217–246). Springer US. https://doi.org/10.1007/978-1-4757-6418-5_12
- Muschetto, T., & Siegel, J. T. (2021). Bibliometric review of attribution theory: Document citation analysis. *Motivation Science*, 7(4), 439–450. <https://doi.org/10.1037/mot0000253>
- Neale, J. (1997). Homelessness and theory reconsidered. *Housing Studies*, 12(1), 47–61. <https://doi.org/10.1080/02673039708720882>
- Nilsson, S., Nordentoft, M., & Hjorthøj, C. (2019). Individual-level predictors for becoming homeless and exiting homelessness: A systematic review and meta-analysis. *Journal of Urban Health*, 96. <https://doi.org/10.1007/s11524-019-00377-x>
- Nudelman, G., & Shiloh, S. (2011). Who deserves to be sick? An exploration of the relationships between belief in a just world, illness causal attributions and their fairness judgements. *Psychology, Health & Medicine*, 16(6), 675–685. <https://doi.org/10.1080/13548506.2011.569730>

- Oppenheimer, D. M., & Olivola, C. Y. (2011). *The science of giving: Experimental approaches to the study of charity*. Psychology Press. (353385).
<https://doi.org/10.4324/9780203865972>
- Otten, M., Seth, A. K., & Pinto, Y. (2017). A social Bayesian brain: How social knowledge can shape visual perception. *Brain and Cognition, Perspectives on Human Probabilistic Inferences and the "Bayesian Brain,"* 112, 69–77.
<https://doi.org/10.1016/j.bandc.2016.05.002>
- Pellegrini, R. J., Queirolo, S. S., Monarrez, V. E., & Valenzuela, D. M. (1997). Political identification and perceptions of homelessness: Attributed causality and attitudes on public policy. *Psychological Reports*, 80(3 Pt 2), 1139–1148.
<https://doi.org/10.2466/pr0.1997.80.3c.1139>
- Petit, J., Loubiere, S., Tinland, A., Vargas-Moniz, M., Spinnewijn, F., Manning, R., Santinello, M., Wolf, J., Bokszczanin, A., Bernad, R., Kallmen, H., Ornelas, J., Auquier, P., & Group, H.-E. consortium study. (2019). European public perceptions of homelessness: A knowledge, attitudes and practices survey. *PLOS ONE*, 14(9), e0221896. <https://doi.org/10.1371/journal.pone.0221896>
- Phillips, L. (2015). Homelessness: Perception of causes and solutions. *Journal of Poverty*, 19(1), 1–19. <https://doi.org/10.1080/10875549.2014.951981>
- Piat, M., Polvere, L., Kirst, M., Voronka, J., Zabkiewicz, D., Plante, M.-C., Isaak, C., Nolin, D., Nelson, G., & Goering, P. (2014). Pathways into homelessness: Understanding how both individual and structural factors contribute to and sustain homelessness in Canada. *Urban Studies*, 52. <https://doi.org/10.1177/0042098014548138>
- Pleace, N. (2016). Researching homelessness in Europe: Theoretical perspectives. *European Journal of Homelessness*, 10(3).
- Pratoomchat, P. (2019). Homelessness and housing market condition in the United States. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3433765>
- Pruitt, A. S., McKinsey, E., & Barile, J. P. (2020). A state of emergency: Dominant cultural narratives on homelessness in Hawai‘i. *Journal of Community Psychology*, 48(5), 1603–1619. <https://doi.org/10.1002/jcop.22352>
- R Core Team. (2025). *R: A language and environment for statistical computing*. (Version 4.5.1) [Computer software]. <https://www.r-project.org/>
- Reich, B., & Wang, X. (2015). And justice for all: Revisiting the global belief in a just world scale. *Personality and Individual Differences*, 78.
<https://doi.org/10.1016/j.paid.2015.01.031>

- Reisenzein, R. (1986). A structural equation analysis of Weiner's attribution-affect model of helping behavior. *Journal of Personality and Social Psychology*, 50(6), 1123–1133. <https://doi.org/10.1037/0022-3514.50.6.1123>
- Revelle, W. (2025). *psych: Procedures for psychological, psychometric, and personality research*. Northwestern University. <https://CRAN.R-project.org/package=psych>
- Roberts, A., & Steinkopf, J. (2022). The discourse-cognition-society triangle of homelessness: A critical discourse study. *Housing, Theory and Society*, 39(5), 573–588. <https://doi.org/10.1080/14036096.2022.2058603>
- Rossetto, A., Jorm, A. F., & Reavley, N. J. (2016). Predictors of adults' helping intentions and behaviours towards a person with a mental illness: A six-month follow-up study. *Psychiatry Research*, 240, 170–176. <https://doi.org/10.1016/j.psychres.2016.04.037>
- Rubin, Z., & Peplau, A. (1973). Belief in a just world and reactions to another's lot: A study of participants in the national draft lottery. *Journal of Social Issues*, 29(4), 73–93. <https://doi.org/10.1111/j.1540-4560.1973.tb00104.x>
- Rudolph, U., Roesch, S., Greitemeyer, T., & Weiner, B. (2004). A meta-analytic review of help giving and aggression from an attributional perspective: Contributions to a general theory of motivation. *Cognition and Emotion*, 18(6), 815–848. <https://doi.org/10.1080/02699930341000248>
- Sangiuliano, C., Moraes, J., & Howells, S. (2025). Media representations of homelessness in three mid-sized Canadian cities: Integrative review and comparative analysis. *International Journal on Homelessness*, 5(1), 170–187. <https://doi.org/10.5206/ijoh.2023.3.17736>
- Savolainen, R. (2013). Approaching the motivators for information seeking: The viewpoint of attribution theories. *Library & Information Science Research*, 35(1), 63–68. <https://doi.org/10.1016/j.lisr.2012.07.004>
- Schmidt, G., & Weiner, B. (1988). An attribution-affect-action theory of behavior: Replications of judgments of help-giving. *Personality and Social Psychology Bulletin*, 14, 610–621. <https://doi.org/10.1177/0146167288143021>
- Schmitt, J. (2015). *Attribution theory*. <https://doi.org/10.1002/9781118785317.weom090014>
- Schöber, K., Anzengruber, S., Dörr, D., Ehrntraut, B., Einfalt-Schneider, J., Enachescu, J., Heuberger, R., Korunovska, J., Rexhepi, A., Steininger, J., & Wittmann, L. (2025). *Wohnen 2024*. Statistik Austria. https://www.statistik.at/fileadmin/publications/Wohnen_2024_Web-barrierefrei.pdf

- Schreiter, S., Speerforck, S., Schomerus, G., & Gutwinski, S. (2021). Homelessness: Care for the most vulnerable – a narrative review of risk factors, health needs, stigma, and intervention strategies. *Current Opinion in Psychiatry*, 34(4), 400.
<https://doi.org/10.1097/YCO.0000000000000715>
- Serme-Morin, C., & Coupechoux, S. (2021). *Sixth overview of housing exclusion in Europe*. FEANTSA (European Federation of National Organisations Working with the Homeless). <https://www.feantsa.org/resources/6th-overview-of-housing-exclusion-in-europe-2022-2>
- Sheeran, P. (2002). Intention—behavior relations: A conceptual and empirical review. *European Review of Social Psychology*, 12(1), 1–36.
<https://doi.org/10.1080/14792772143000003>
- Shelton, K. H., Taylor, P. J., Bonner, A., & van den Bree, M. (2009). Risk factors for homelessness: Evidence from a population-based study. *Psychiatric Services (Washington, D.C.)*, 60(4), 465–472. <https://doi.org/10.1176/ps.2009.60.4.465>
- Shen, X., Lv, X., Lin, S., & Li, C. (2019). Application of the stereotype content model to destination image: Evidence from residents of mainland China. *Journal of Destination Marketing & Management*, 14, 100375. <https://doi.org/10.1016/j.jdmm.2019.100375>
- Shinn, M. (2007). International homelessness: Policy, socio-cultural, and individual perspectives. *Journal of Social Issues*, 63(3), 657–677. <https://doi.org/10.1111/j.1540-4560.2007.00529.x>
- Small, D. A., & Loewenstein, G. (2003). Helping a victim or helping the victim: Altruism and identifiability. *Journal of Risk and Uncertainty*, 26(1), 5–16.
<https://doi.org/10.1023/A:1022299422219>
- Somerville, P. (2013). Understanding homelessness. *Housing*, 30.
<https://doi.org/10.1080/14036096.2012.756096>
- Stoop, J. (2014). From the lab to the field: Envelopes, dictators and manners. *Experimental Economics*, 17(2), 304–313. <https://doi.org/10.1007/s10683-013-9368-6>
- Suchikova, Y., Tsybuliak, N., Teixeira da Silva, J. A., & Nazarovets, S. (2026). GAIDeT (Generative AI Delegation Taxonomy): A taxonomy for humans to delegate tasks to generative artificial intelligence in scientific research and publishing. *Accountability in Research*, 33(3), 2544331. <https://doi.org/10.1080/08989621.2025.2544331>
- Tamayo Salinas, S., Hernández, E. M., Tirado-Otálvaro, A. F., Tamayo Salinas, S., Hernández, E. M., & Tirado-Otálvaro, A. F. (2024). Estigma hacia habitantes de calle, consumo de drogas y género. Consecuencias en derechos humanos y salud pública.

- Diversitas: Perspectivas en Psicología*, 20(1), 153–167.
<https://doi.org/10.15332/22563067.10229>
- Tate, A., Edwards, K., Holmes, N., Buffer, S., Fusfeld, Z., Baronet, W., & Frasso, R. (2022). ‘Even a smile helps’: Exploring the interactions between people experiencing homelessness and passersby in public spaces. *International Journal of Social Psychiatry*, 68(3), 525–532. <https://doi.org/10.1177/0020764021989385>
- Tausen, B. M., & Fossum, J. (2024). Empathy helps, dehumanization harms: Beliefs about the causes of homelessness are (in)directly related to intentions to help and harm those who are unhoused. *Journal of Applied Social Psychology*, 54(7), 416–427. <https://doi.org/10.1111/jasp.13050>
- Thielmann, I., Böhm, R., Ott, M., & Hilbig, B. E. (2021). Economic games: An introduction and guide for research. *Collabra: Psychology*, 7(1), 19004. <https://doi.org/10.1525/collabra.19004>
- Tipple, G., & Speak, S. (2005). Definitions of homelessness in developing countries. *Habitat International*, 29(2), 337–352. <https://doi.org/10.1016/j.habitatint.2003.11.002>
- Torchiano, M. (2020). *effsize: Efficient effect size computation*. <https://doi.org/10.5281/zenodo.1480624>
- Toro, P. (2007). Toward an international understanding of homelessness. *Journal of Social Issues*, 63(3), 461–481. <https://doi.org/10.1111/j.1540-4560.2007.00519.x>
- Toro, P., & McDonnell, D. (1992). Beliefs, attitudes, and knowledge about homelessness: A survey of the general public. *American Journal of Community Psychology*, 20, 53–80. <https://doi.org/10.1007/BF00942181>
- Toro, P., Tompsett, C. J., Lombardo, S., Philippot, P., Nachtergaeel, H., Galand, B., Schlienz, N., Stammel, N., Yabar, Y., Blume, M., MacKay, L., & Harvey, K. (2007). Homelessness in Europe and the United States: A comparison of prevalence and public opinion. *Journal of Social Issues*, 63(3), 505–524. <https://doi.org/10.1111/j.1540-4560.2007.00521.x>
- Tsai, J., Lee, C. Y. S., Shen, J., Southwick, S. M., & Pietrzak, R. H. (2019). Public exposure and attitudes about homelessness. *Journal of Community Psychology*, 47(1), 76–92. <https://doi.org/10.1002/jcop.22100>
- United Nations. (n.d.). *Homelessness and human rights* (A/HRC/43/43). Office of the High Commissioner for Human Rights. Retrieved January 3, 2026, from <https://www.ohchr.org/en/special-procedures/sr-housing/homelessness-and-human-rights>

- Vázquez, J. J., & Panadero, S. (2022). The influence of political ideology on stereotypes, meta-stereotypes and causal attributions of homelessness in Spain. *Journal of Poverty and Social Justice*, 30. <https://doi.org/10.1332/175982721X16395889879140>
- Vázquez, J. J., Panadero, S., & Zúñiga, C. (2017). Actors, observers, and causal attributions of homelessness: Differences in attribution for the causes of homelessness among domiciled and homeless people in Madrid (Spain). *American Journal of Orthopsychiatry*, 87(1), 15–22. <https://doi.org/10.1037/ort0000130>
- Weiner, B. (1980). A cognitive (attribution)-emotion-action model of motivated behavior: An analysis of judgments of help-giving. *Journal of Personality and Social Psychology*, 39, 186–200. <https://doi.org/10.1037/0022-3514.39.2.186>
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, 548–573. <https://doi.org/10.1037/0033-295X.92.4.548>
- Weiner, B. (2015). *Heider, Fritz (1896–1988)*. 750–754. <https://doi.org/10.1016/B978-0-08-097086-8.61048-6>
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, 55(5), 738–748. <https://doi.org/10.1037//0022-3514.55.5.738>
- Wickham, H., Averick, M., Bryan, J., Chang, W., McGowan, L. D., François, R., Grolemund, G., Hayes, A., Henry, L., Hester, J., Kuhn, M., Pedersen, T. L., Miller, E., Bache, S. M., Müller, K., Ooms, J., Robinson, D., Seidel, D. P., Spinu, V., ... Yutani, H. (2019). Welcome to the tidyverse. *Journal of Open Source Software*, 4(43), 1686. <https://doi.org/10.21105/joss.01686>
- Young, A., & Petty, J. (2019). On visible homelessness and the micro-aesthetics of public space. *Australian & New Zealand Journal of Criminology*, 52(4), 444–461. <https://doi.org/10.1177/0004865818823945>
- Zagefka, H., Noor, M., Brown, R., de Moura, G. R., & Hopthrow, T. (2011). Donating to disaster victims: Responses to natural and humanly caused events. *European Journal of Social Psychology*, 41(3), 353–363. <https://doi.org/10.1002/ejsp.781>
- Zhao, E. (2023). The key factors contributing to the persistence of homelessness. *International Journal of Sustainable Development & World Ecology*, 30(1), 1–5. <https://doi.org/10.1080/13504509.2022.2120109>
- Ziv, Y., & Hadad, B. S. (2021). Understanding the mental roots of social perceptions and behaviors: An integrated information-processing perspective. *Heliyon*, 7(2), e06168. <https://doi.org/10.1016/j.heliyon.2021.e06168>

Zuckerman, M. (1975). Belief in a just world and altruistic behavior. *Journal of Personality and Social Psychology*, 31(5), 972–976. <https://doi.org/10.1037/h0076793>

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Appendix A

Abstract

Homelessness is an increasingly visible social issue, yet public reactions towards homeless individuals are driven by psychological mechanisms that are not yet fully understood. Drawing on the stereotype content model (Fiske et al., 2002) and the attribution-affect-action theory of behavior (Weiner, 1980), the present study examined whether the causes named for an individual's homelessness influence social judgements and behavioral intentions. In a between-subjects experiment, 113 participants read a vignette describing how a homeless man called Alex became homeless. The reasons listed were either individual (e.g. personal characteristics and behaviors) or structural (e.g. economic shortages, lack of affordable housing) factors. Participants subsequently rated how much responsibility they assigned to the homeless individual personally and how much to external factors, how warm and competent they rated him, and how much money they would give him in a hypothetical dictator game. All hypotheses were supported: Participants in the individual-cause condition attributed greater responsibility to the homeless person and less responsibility to external factors, rated him lower in warmth and competence and were less willing to donate money than participants in the structural-cause condition. These findings extend previous research, which has so far focused on attitudes towards homeless people as an anonymous group, by demonstrating that similar patterns exist toward an identifiable homeless individual. This is relevant because in day-to-day life, people directly interact with specific individuals and not homeless people as a collective.

Keywords: homelessness, responsibility attributions, attribution-affect-action theory, stereotype content model, helping intentions

Appendix B

Zusammenfassung

Obdachlosigkeit ist ein zunehmend sichtbares gesellschaftliches Problem. Dennoch werden die psychologischen Mechanismen, die hinter den Reaktionen der Öffentlichkeit auf obdachlose Personen stecken, noch nicht vollständig verstanden. Auf der Grundlage des Stereotyp-Inhaltsmodells (Fiske et al., 2002) und der Attributions-Affekt-Handlungs Theorie (Weiner, 1980) untersucht die vorliegende Studie, ob die Ursachen, die für die Obdachlosigkeit einer Person genannt werden, soziale Urteile und Verhaltensintentionen beeinflussen. In einem Zwischen-Gruppen-Experiment lasen 113 Teilnehmende eine Vignette, die beschrieb, wie ein obdachloser Mann namens Alex obdachlos wurde. Die genannten Ursachen waren entweder individuelle (z.B. persönliche Eigenschaften und Verhaltensweisen) oder strukturelle (z.B. wirtschaftliche Engpässe, Mangel an bezahlbarem Wohnraum) Faktoren. Anschließend bewerteten die Teilnehmenden, wie viel Verantwortung sie dem obdachlosen Mann persönlich, und wie viel sie äußeren Umständen zuordnen, wie warm und kompetent sie ihn einschätzen, und wie viel Geld sie ihm in einem hypothetischen Diktatorspiel geben würden. Alle Hypothesen wurden bestätigt: Teilnehmende in der Bedingung mit individuellen Ursachen schrieben der obdachlosen Person mehr und äußeren Umständen weniger Verantwortung zu, bewerteten ihn als weniger warm und kompetent und waren weniger bereit zu spenden als Teilnehmende in der Bedingung mit strukturellen Ursachen. Diese Ergebnisse erweitern die bisherige Forschung, die sich hauptsächlich auf die Einstellungen gegenüber obdachlosen Menschen als anonyme Gruppe konzentriert hat, indem sie zeigen, dass ähnliche Muster auch gegenüber identifizierbaren Individuen bestehen. Das ist im Alltag relevant, da Menschen direkt mit spezifischen Personen interagieren, nicht mit obdachlosen Menschen als Kollektiv.

Schlüsselwörter: Obdachlosigkeit, Verantwortungszuschreibung, Attributions-Affekt-Handlungs Theorie, Stereotyp-Inhaltsmodell, Hilfsabsichten

Appendix C

Preregistration deviation

The two attention checks were preregistered as follows: “If you are paying thorough attention, choose 6 (strongly agree).” and “If you are paying thorough attention, choose 1 (strongly disagree).” Within the first day of data collection, a participant reported that the wording was misleading, as it is not intuitive to choose ‘strongly disagree’ when indicating whether they are paying attention. This ambiguity was reflected in the initial data: nearly half of the participants failed the attention checks. Because the participant’s feedback suggested that the items were failed due to confusing wording instead of inattentiveness, the items were revised to state the following: “If you are paying thorough attention, choose 6.” and “If you are paying thorough attention, choose 1.” The only change was the removal of the verbal labels. Without these labels, participants were simply asked to select a number instead of counterintuitively ‘strongly disagreeing’ to paying attention.

Participants who had already completed the survey using the original formulations were not excluded. The revision affected only the attention checks and not the experimental measures, so their data were considered valid. As with all participants, those who failed the attention checks were excluded from the final sample, whether they filled out the original or the revised version.

Appendix D

Whole questionnaire

This appendix contains the full questionnaire used in the study, including the informed consent page, experimental vignettes, all measures, attention checks, demographic questions, debriefing and closing page. Participants saw only one of the two vignettes, depending on the condition to which they were randomly assigned (individual-cause versus structural-cause). The remainder of the survey was identical for all participants.

D1: Instructions and consent

Welcome!

Thank you for participating in this study!

You will read a short description about a homeless man named Alex. Then, you will be asked to answer a few questions. There are no right or wrong answers.

The questionnaire takes maximum 5 minutes to complete.

Your participation is voluntary. You may stop the survey at any time without giving a reason.

At the end of the survey, you will be asked about your demographics. However, no personal information will be asked that makes it possible to identify you. All responses will be collected completely anonymously and used exclusively for the purposes of my master's thesis. The anonymized data will be shared with other researchers.

There are no known risks associated with participation. There is no direct benefit to you, however, your participation contributes to scientific research.

If you have any questions or complaints, do not hesitate to contact me via a12107025@unet.univie.ac.at.

Please indicate whether you agree to the terms and conditions described above.

- ☐ I have read the terms and conditions described above. I consent that my data will be used and shared anonymously.
- ☐ I have read the terms and conditions described above. I do not consent that my data will be used and shared anonymously.”

D2: Experimental manipulation (vignettes)

Individual-cause condition.

Due to a family conflict, Alex moved out on his own before he was fully financially prepared. He had a tendency to isolate himself when stressed and sometimes drank to cope with anxiety. This affected his punctuality and focus, making it hard to keep a job longer than a few weeks. He struggled to maintain consistent schedules, which made paying bills difficult. Savings ran low, and unexpected expenses piled up. He alienated himself from his friends and

hadn't spoken with any of his family members for years, which left him with little to no support. Gradually, he fell behind on rent and eventually lost his apartment. He now has to rely on temporary shelters.

Structural-cause condition.

Alex had lived in his apartment for years, paying rent on time and working steadily at a small grocery store. When the building was sold to a new developer, his rent doubled overnight, far beyond what his paycheck could cover. He searched for cheaper places, but the waiting lists for affordable housing stretched for months. At the same time, the store cut his hours because of declining business in the neighborhood. With no nearby family, he fell behind on rent within a few weeks. He tried applying for housing assistance, but the process was slow and overloaded with applicants. By the time his application moved forward, he had already been evicted. With nowhere else to go, he ended up having to sleep in a shelter.

D3: Attention check 1

If you are paying thorough attention, choose 6.

1-2-3-4-5-6

D4: Responsibility Attributions

Please specify to what degree you find Alex and external factors responsible for his homelessness.

To what extent is Alex responsible for his homelessness?

1 = not at all ... 6 = completely

To what extent are external factors responsible for his homelessness?

1 = not at all ... 6 = completely

Percentage-allocation item

How much do you find individual versus external factors responsible for Alex' homelessness?

Please assign a percentage of responsibility to each factor, so that the overall assignment of responsibility totals 100%.

- % of responsibility on Alex: ____
- % of responsibility on external factors: ____

D5: Warmth and competence ratings

Warmth dimension

Please rate Alex according to several characteristics:

How warm is Alex?

How good natured is Alex?

How tolerant is Alex?

How sincere is Alex?

1 = not at all ... 6 = extremely

Competence dimension

How competent is Alex?

How confident is Alex?

How independent is Alex?

How competitive is Alex?

How intelligent is Alex?

1 = not at all ... 6 = extremely

D6: Intention to help by donating money

Imagine you have won 20€ in a tombola.

How much of this money would you realistically give to Alex, if you walked past him after winning the prize? ____

D7: Belief in a just world

Lastly, please answer these questions about your belief in a just world.

I feel that people get what they are entitled to have.

I feel that a person's efforts are noticed and rewarded.

I feel that people earn the rewards and punishments they get.

I feel that people who meet with misfortune have brought it on to themselves.

I feel that people get what they deserve.

I feel that rewards and punishments are fairly given.

I basically feel that the world is a fair place.

1 = strongly disagree ... 6 = strongly agree

D8: Attention check 2

If you are paying thorough attention, choose 1.

1-2-3-4-5-6

D9: Demographics

Finally, please answer the following demographic questions.

Age

How old are you?

Age in years: ____

Gender identity

What is your gender identity?

- ☐ Female

- ☐ Male
- ☐ Non-binary
- ☐ Other: ____
- ☐ Prefer not to say

Citizenship

What citizenship(s) do you currently have? ____

Education

What is the highest level of education you have completed?

- ☐ Compulsory schooling (“Pflichtschule”)
- ☐ High school diploma (“Matura”) or equivalent
- ☐ Bachelor’s degree or equivalent
- ☐ Master’s degree or equivalent
- ☐ Doctorate degree or equivalent
- ☐ Other: ____
- ☐ Prefer not to say

Employment status

Which of the following best describes your employment status?

- ☐ Employed full-time
- ☐ Employed part-time
- ☐ Marginal employment (“geringfügig”)
- ☐ Unemployed
- ☐ Student
- ☐ Retired
- ☐ Other: ____
- ☐ Prefer not to say

Experience with homelessness

Have you ever experienced homelessness or been at risk of homelessness (e.g. unable to pay rent, facing eviction, staying with friends or family due to the inability to find housing)?

- ☐ Yes, I have experienced homelessness.
- ☐ Yes, I have been at risk of homelessness but was not homeless.
- ☐ No, I have not experienced homelessness or been at risk.
- ☐ Prefer not to say.

Political orientation

How would you describe your overall political orientation? Please indicate your political orientation along the scale from 1 = ‘very left leaning’ to 7 = ‘very right-leaning’.

- 1 – very left-leaning
- 2 – left-leaning
- 3 – slightly left-leaning
- 4 – neutral
- 5 – slightly right-leaning
- 6 – right-leaning
- 7 – very right-leaning
- prefer not to say

D10: Debriefing

You’re all done! Thank you for participating in the study.

The goal of this study is to examine whether people think and behave differently toward a homeless person depending on whether the causes of their homelessness are described as primarily individual (e.g. personal characteristics, substance abuse, family conflicts) versus structural (e.g. housing market, limited job opportunities, economic situation). Understanding these differences is important because the way homelessness is explained can shape public responses and support for different types of solutions.

This has implications for how homelessness is communicated in the real world (for example in the media, political messaging, and campaigns by social organizations).

D11: Last page

Thank you for completing this questionnaire!

Your answers were submitted, you may close the browser window or tab now.

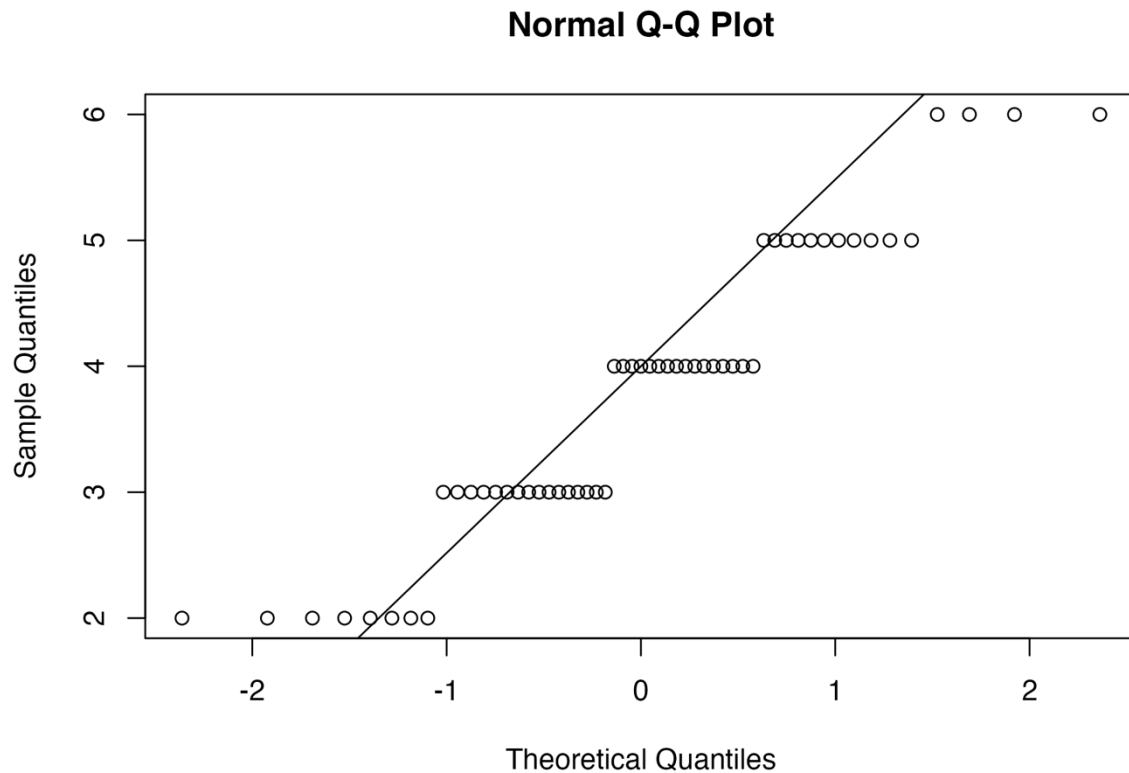
Appendix E

Assumption checks: Q-Q plots

To test the assumption of normality for the dependent variables, Quantile-Quantile (Q-Q) plots were conducted and visually inspected. They compare the quantiles that were observed in the sample to the quantiles expected if they were normally distributed. The plotted points should follow a straight 45-degree line, otherwise they indicate deviations from normality (i.e. skewness, kurtosis or outliers). The following Q-Q plots are sorted by variable and condition.

Figure 7

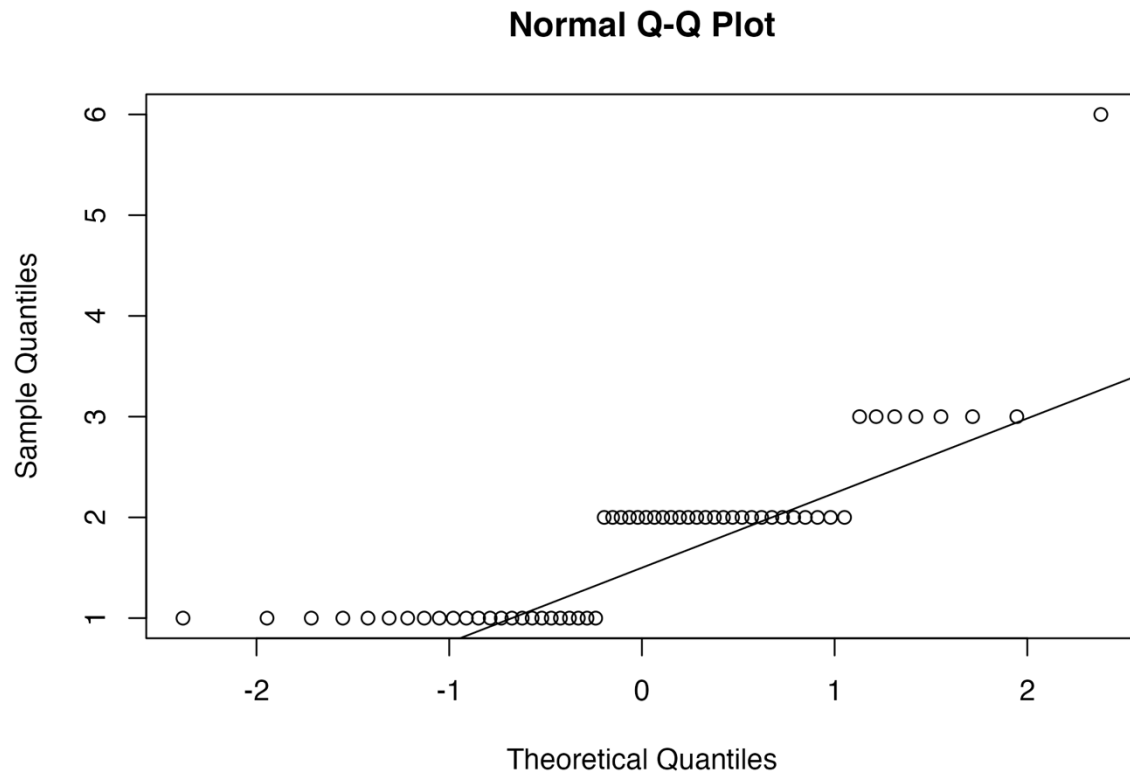
Q-Q plot for the responsibility attributed to the homeless person (H1a) in the individual-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality can be assumed.

Figure 8

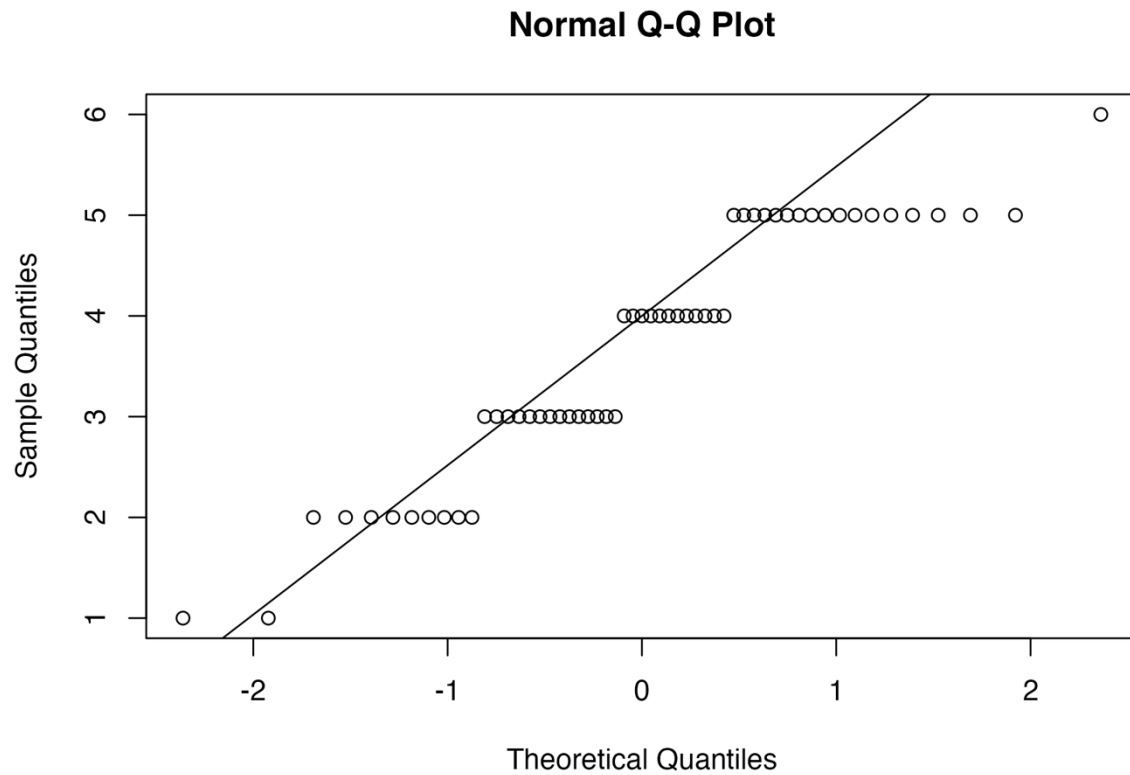
Q-Q plot for the responsibility attributed to the homeless person (H1a) in the structural-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality needs to be rejected.

Figure 9

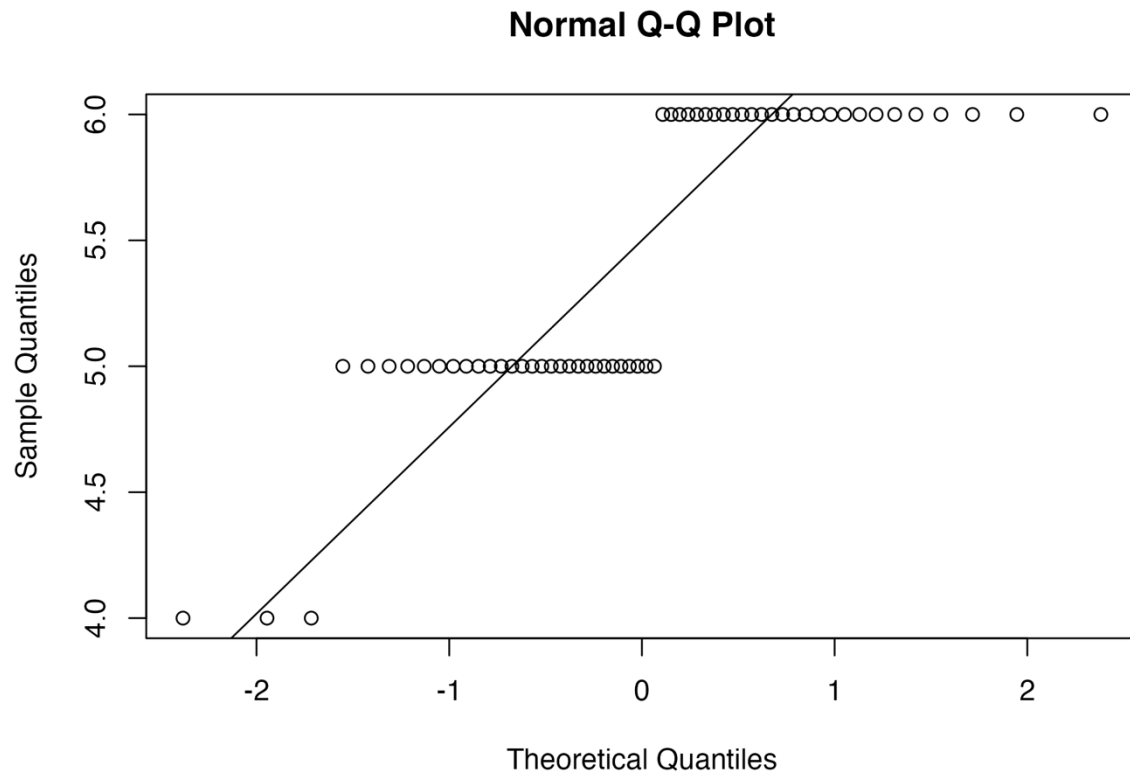
Q-Q plot for the responsibility attributed to external factors (H1b) in the individual-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality can be assumed.

Figure 10

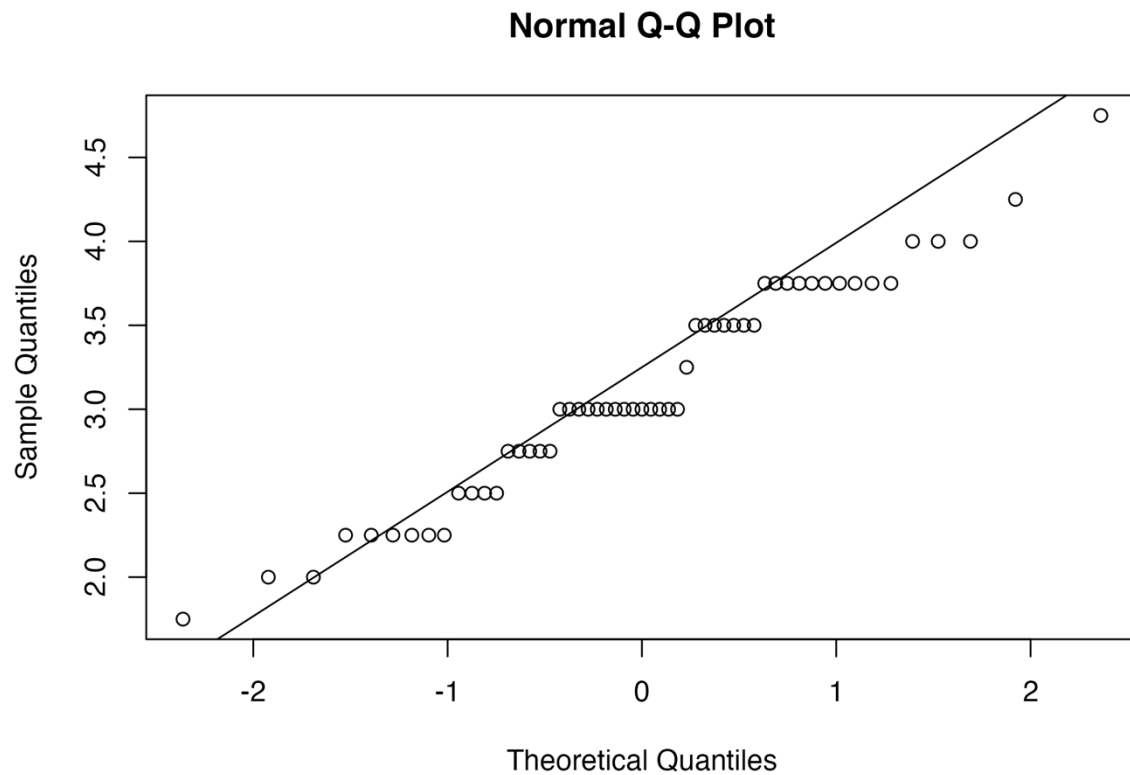
Q-Q plot for the responsibility attributed to external factors (H1b) in the structural-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality needs to be rejected.

Figure 11

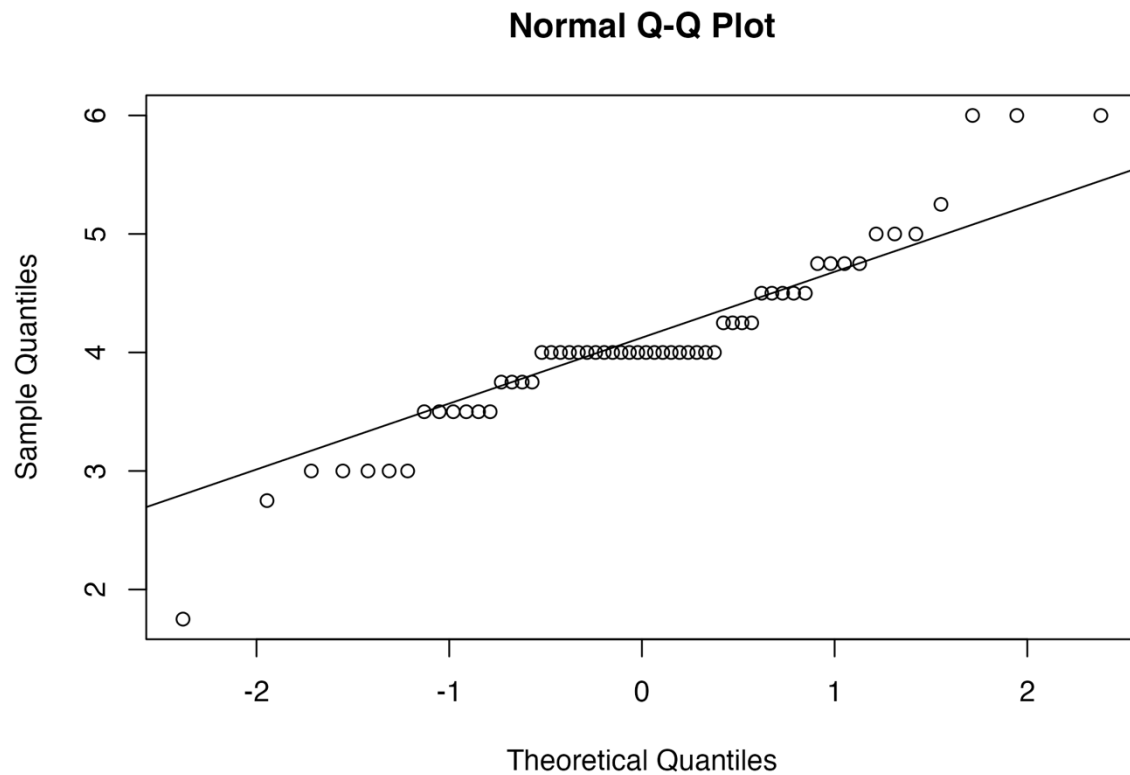
Q-Q plot for the warmth ratings (H2a) in the individual-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality can be assumed.

Figure 12

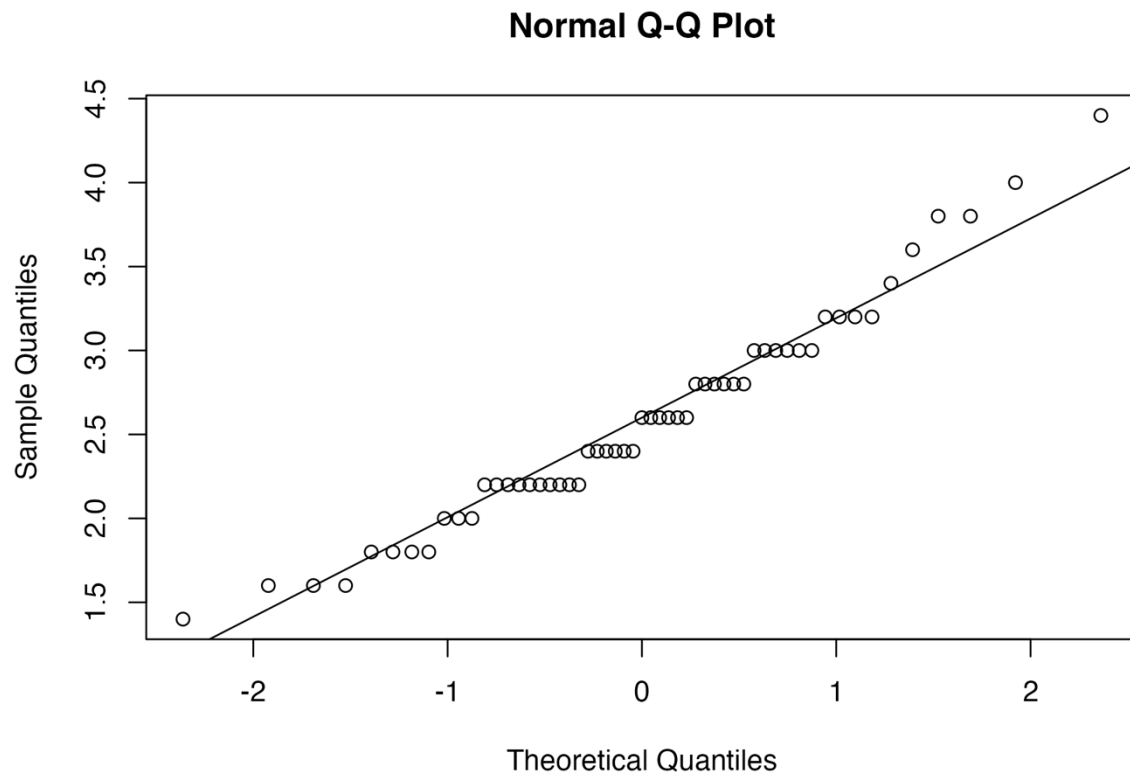
Q-Q plot for the warmth ratings (H2a) in the structural-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality can be assumed.

Figure 13

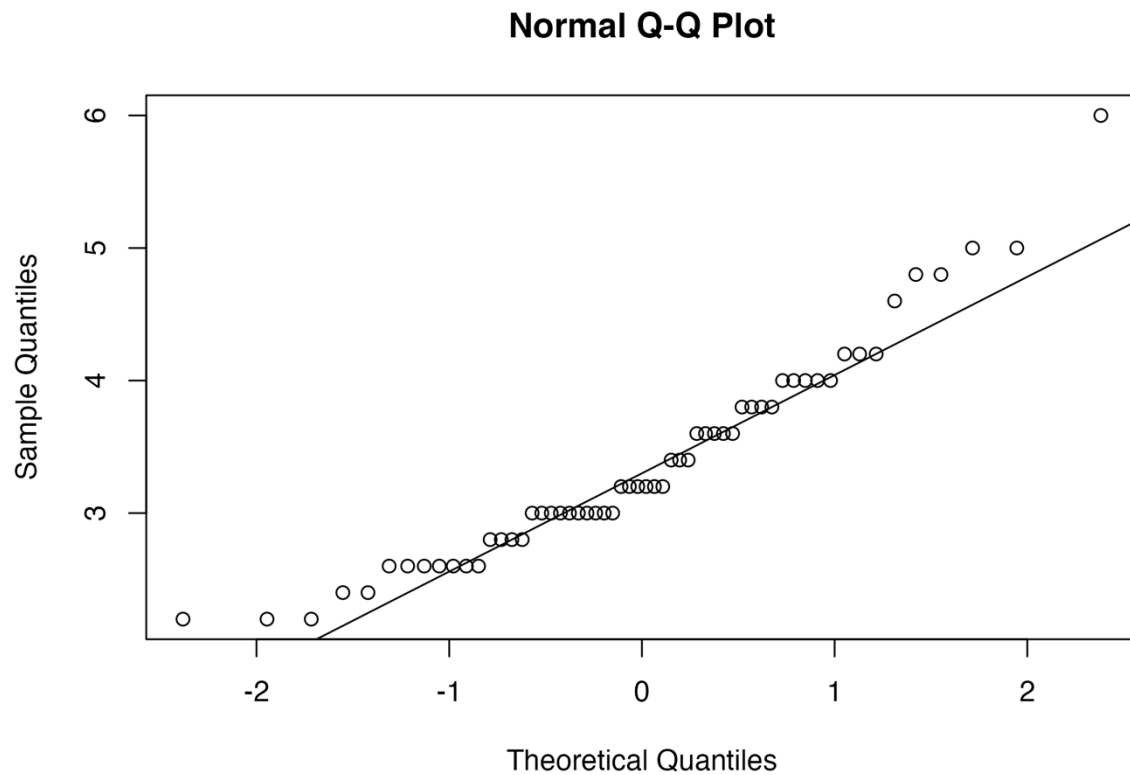
Q-Q plot for the competence ratings (H2b) in the individual-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality can be assumed.

Figure 14

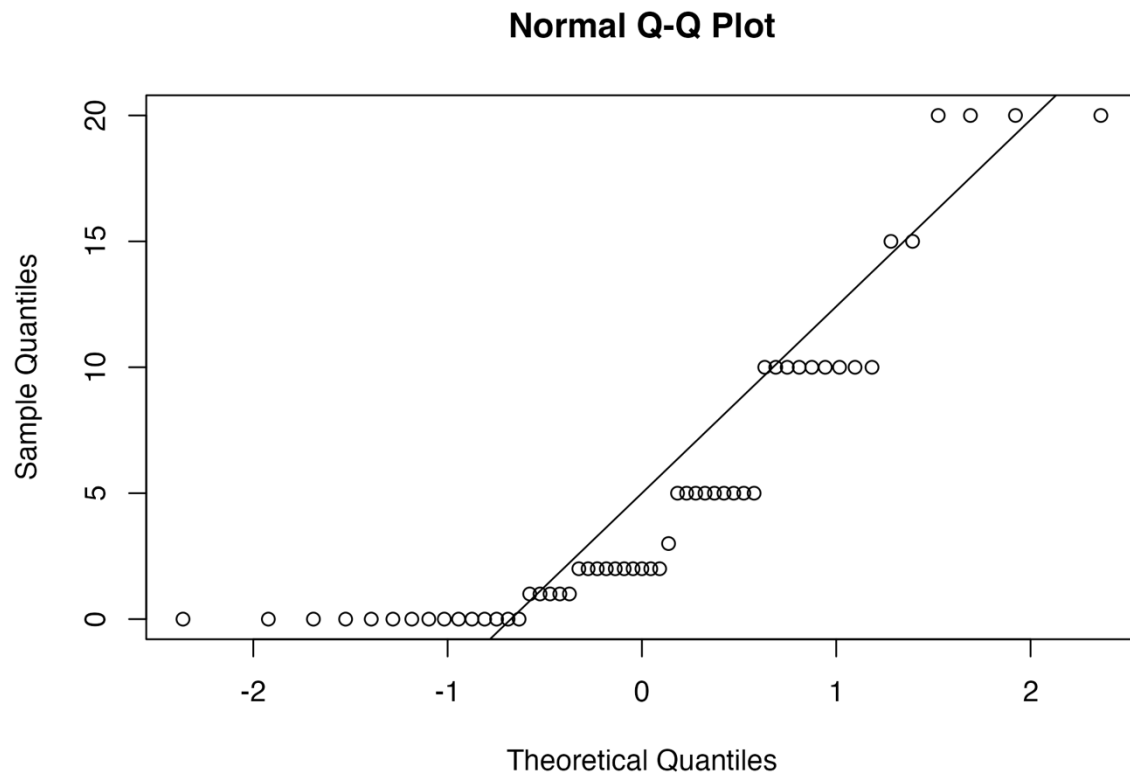
Q-Q plot for the competence ratings (H2b) in the structural-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality can be assumed.

Figure 15

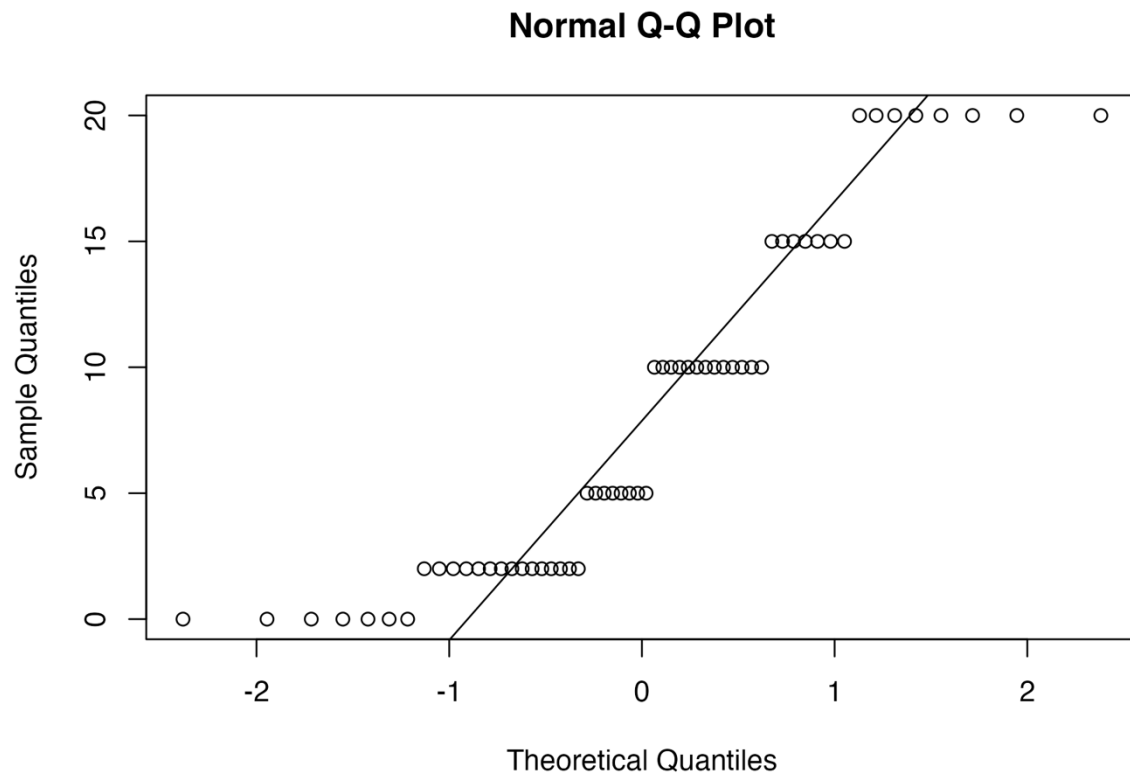
Q-Q plot for the amount of money donated (H3) in the individual-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality needs to be rejected.

Figure 16

Q-Q plot for the amount of money donated (H3) in the structural-cause condition



Note. Points represent the sample data paired against the corresponding theoretical quantiles. The diagonal line represents the expected distribution if normality were applicable. This Q-Q plot suggests that normality needs to be rejected.

Appendix F

Declaration of AI usage

The author declares the use of generative AI in the research and writing process. According to the GAIDeT taxonomy (Suchikova et al., 2026), the following tasks were assisted by GAI tools under full human supervision:

- Help with literature search
- R debugging
- Proofreading

The GAI tools used were: ChatGPT-5, Consensus. Responsibility for the final manuscript lies entirely with the author. GAI tools are not listed as authors and do not bear responsibility for the final outcomes.

Declaration submitted by: Alina Akrivou