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**“Dehumanization of male and female targets in
the context of sexual objectification”**

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Sexual violence¹ is a pervasive and deeply troubling reality for women across the globe. In the United States, one in five women experienced attempted or completed rape in her lifetime, while more than a third of women encountered unwanted sexual contact (Smith et al., 2018). More than a third of women in the US experienced sexual violence, physical violence or stalking by their intimate partner in their lifetime. Two thirds of these women reported first victimization before they reached an age of 25 years, including 27% reporting victimization before even turning 18. As a result, a third of these women was injured, a third developed post-traumatic stress disorder (PTSD) symptoms and a fourth of these women were fearful and concerned for safety. One in four men also reported such violence, but with less severe outcomes: fewer report injury, PTSD, or fear. Intimate partner sexual violence affected one in five women and one in 13 men in the US (Basile et al., 2022).

Similar results were found by a global Study from the World Health Organization (WHO), analyzing the prevalence of violence against women across 161 countries and areas. Thirty percent of the women reported being subjected to non-partner sexual violence or physical and/or sexual violence by an intimate partner or both (WHO, 2021). In an EU-wide survey of 42,002 women, more than 50 percent reported experiencing violence during their lifetime. One out of five women experienced physical, sexual and/or psychological violence by their intimate partner (Barbier et al., 2022).

In Austria 23% of women have experienced physical violence and 24% have experienced sexual violence, either within or outside their intimate relationships, when they were aged 15 or older (Enachescu & Hinsch, 2022). Thus, approximately one in three women has experienced physical or sexual aggression in her lifetime, which aligns with the alarming data found in other countries (e.g. WHO, 2021).

Several studies revealed an increased risk of depression, anxiety, insomnia, mood swings, sexual dysfunction and PTSD in women who have suffered sexual violence (Domenech Del Rio & Sirvent Garcia del Valle, 2017; Campbell, 2002; Cascardi et al., 1999; Silva et al., 1997). In addition, there is an increased risk of sexually transmitted

¹ Sexual violence is “any sexual act, attempt to obtain a sexual act, or other act directed against a person’s sexuality using coercion, by any person regardless of their relationship to the victim, in any setting. It includes rape, defined as the physically forced or otherwise coerced penetration of the vulva or anus with a penis, other body part or object, attempted rape, unwanted sexual touching and other non-contact forms” (WHO, 2021)

diseases, alcohol abuse and suicide for women who have experienced sexual violence, compared to those who have not (García-Moreno et al., 2013).

It has been argued that *sexual objectification* plays an important role in facilitating violence against women (Dworkin, 2000; Loughnan & Pacilli, 2014; Vasquez et al., 2018). Objectification takes place when an individual is reduced to a mere object. In the context of sexual objectification, this often involves women whose bodies or body parts are regarded as mere tools, detached from their personality. Consequently, akin to inanimate objects valued for how they look or what they can do, objectified women are primarily judged based on their physical attractiveness and functional use (Vaes et al., 2019). The feminist writer Dworkin (2000) gave this definition for objectification in general:

Objectification occurs when a human being, through social means, is made less than human, turned into a thing or commodity, bought and sold. When objectification occurs, a person is depersonalized, so that no individuality or integrity is available socially or in what is an extremely circumscribed privacy (because those who dominate determine its boundaries). Objectification is an injury right at the heart of discrimination: those who can be used as if they are not fully human are no longer fully human in social terms; their humanity is hurt by being diminished. (p. 15)

Objectification and Dehumanization

The foundation for the theoretical framework of objectification lies in Kantian philosophy. Kant viewed a man's desire for a woman as not rooted in her identity as a human being, but rather in her being a woman; her humanity becomes irrelevant and she is reduced to a mere 'object of appetite', valued solely for her sexuality rather than her personhood. Hence sexuality can be morally troubling, because it can lead individuals to treat others not as autonomous beings with inherent dignity, but as objects for use or pleasure (Papadaki, 2007).

The initial theory of objectification in psychology dates to the 1990's where Frederickson and Roberts (1997) introduced *Objectification Theory*, which describes the societal reduction of women to sexualized objects, stripped apart from their personality. It explained how constant exposure to sexual objectification (e.g., in media or interpersonal interactions) lead women to internalize an observer's perspective on their physical self. This

self-objectification can cause negative outcomes like body shame, anxiety, and reduced cognitive performance. It may also partly explain the unproportional prevalence of unipolar depression, sexual dysfunction, and eating disorders affecting women (Frederickson & Roberts, 1997).

In 1999, Martha Nussbaum identified several key features through which a person can be objectified:

1. *Instrumentality* – Treating a person as a tool for another's purposes.
2. *Denial of autonomy* – Treating a person as lacking self-determination.
3. *Inertness* – Treating a person as passive or lacking agency.
4. *Fungibility* – Treating a person as interchangeable with others.
5. *Violability* – Treating a person as lacking boundary integrity, as if it is permissible to break into.
6. *Ownership* – Treating a person as if they can be owned or traded.
7. *Denial of subjectivity* – Treating a person as if their feelings and experiences do not matter.

While her work is not limited to *sexual objectification*, it has been mainly applied to that context. Nussbaum also outlined that sexual objectification is not inherently morally wrong, as it does not necessarily result in harmful outcomes. Its ethical significance depends on the specific context in which it takes place. In a consensual and reciprocal setting, it may even be positive, for example, when both partners focus on each other's bodies and derive pleasure from being seen as the desired object. Objectification becomes problematic, when it involves harm, coercion, inequality, lack of respect or a denial of personhood (Nussbaum, 1999).

Sexual objectification manifests through various thoughts and actions, like gazing, catcalling, wolf-whistling, car honking, groping, sexual gestures and sexual remarks (Swim et al., 2001; Brinkman & Rickard, 2009). The phenomenon is reinforced by the media, since people are exposed to objectified depictions of women every day. These depictions can be in advertising billboards, the TV, magazines or social media and lead to increased self-objectification, body shame and diminished awareness of internal states and bodily needs (Frederickson & Roberts, 1997; Grabe et al., 2008; Morry & Staska, 2001; Stankiewicz & Rosselli, 2008).

Objectification has been experimentally induced through a range of manipulations involving clothing, posture, and perceptual focus. A substantial body of research demonstrates that individuals can be perceived differently depending on how they are presented. Targets were portrayed either in neutral or everyday clothing to highlight their individuality, or in revealing attire and sometimes even completely naked to induce sexual objectification (Vaes et al., 2019; Holland & Haslam 2016; Gray et al., 2011). These visual cues were usually sufficient to shift the observer's focus from the person's internal characteristics to their physical appearance. In other paradigms, objectification was induced by explicitly instructing participants to attend to their physical features or appearance, in comparison to the control condition, where participants were solicited to focus on the target's personality (Heflick & Goldenberg, 2009; Heflick et al., 2011). In other experiments face-only, full body and body-only pictures were used to vary the degree of sexualization and thereby induce objectification (e.g. Loughnan et al., 2010).

While sexual objectification has been predominantly examined as a phenomenon affecting women, the literature on male objectification is less extensive and partly contradictory. For instance, Heflick et al. (2011) found that male targets were not objectified, whereas their female counterparts were objectified, when the participants had to focus on their appearance. Conversely, several studies indicate that men are also subjected to objectification in a similar manner as women (Loughnan et al., 2010; Cole et al., 2013). It was found that through portrayals in the media, emphasizing idealized body standards, objectification led to self-objectification and increased body dissatisfaction also in men, albeit the observed effects were weaker in men than in women (Morry & Staska, 2001; Karsay et al., 2018). Studies examining the interpersonal dynamics of male objectification remain scarce. This research gap may stem from the fact that women experience sexual objectification regularly and are more frequently portrayed as sexualized figures in the media (Davis, 2018; Holland et al., 2017). Hence, both men and women tend to objectify women more than men (Strelan & Hargreaves, 2005). Nevertheless, investigating the objectification of men can yield important insights into the broader mechanisms of sexual objectification and reveal that men, too, are affected by its consequences.

Sexual objectification has consistently been linked to diminished empathy and consequently to a reduced inclination to engage in helping behavior towards the objectified (e.g. Cogoni et al., 2015; Pacilli et al., 2017). Research indicated that women who are perceived as (sexual) objects tend to evoke less empathetic concern when becoming victims

of sexual assault, with perpetrators being less blamed (Bernard et al., 2015; Holland & Haslam, 2016). Additionally, individuals were generally more willing to inflict harm on those who had been sexually objectified (Loughnan et al., 2010). Moreover, objectified women did not elicit more empathy than inanimate human-like objects (Cogoni et al., 2015).

A crucial factor driving the relation of objectification and reduced empathy and above all making objectification harmful is *dehumanization*, which is the denial of an individual's personhood (Nussbaum, 1999; Vaes et al., 2013). In this process human qualities like emotional depth, cognitive abilities or moral worth are denied. Hence, the target individual is perceived as less than fully human (Heflick & Goldenberg 2009; Vaes et al., 2013).

According to Bastian & Crimston (2014), individuals who experience social exclusion tend to report a diminished sense of their own humanity. In the context of interpersonal maltreatment, it is not only the perpetrator who dehumanizes the target, but can prompt the victim to internalize this treatment, leading to *self-dehumanization*. This process extends beyond self-objectification, as individuals may come to view themselves in less human terms. The detrimental consequences of self-dehumanization can involve aversive self-awareness, cognitive deconstructive states and feelings of shame, guilt, sadness and anger (Bastian & Crimston, 2014).

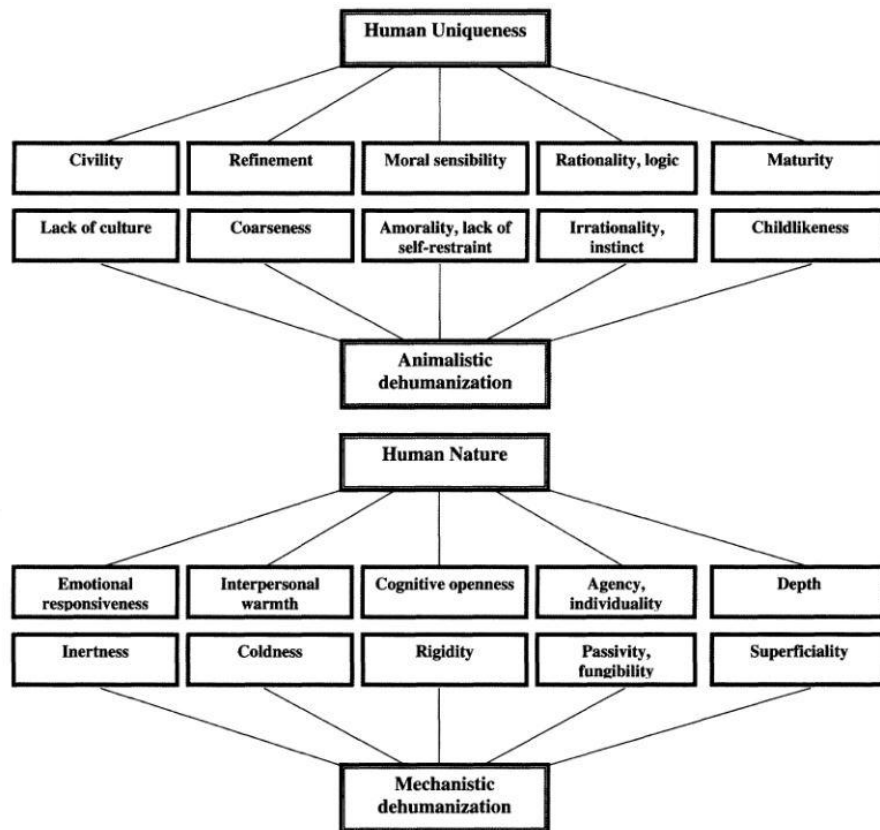
The concept of dehumanization originates from social psychology of the 20th century and has initially been proposed to explain violence, war and racism. During World War II, Erich Fromm (1941) describes dehumanization as a central condition for the emergence of mass violence and authoritarian regimes, as in the Holocaust in its most cruel form (Steizinger, 2018). From the 1970's onwards dehumanization was addressed systematically in this domain (Kelman, 1976; Staub, 1989). Dehumanization increasingly came to be understood as a social mechanism that legitimizes group differences and facilitates aggressive behaviors towards *others*. The others are denied the fundamental human qualities *identity*, meaning their unique individuality, and *community*, referring to their place within a web of meaningful social relationships. When these qualities are stripped away, victims are no longer seen as distinct individuals, but rather as an undifferentiated mass, thereby losing the ability to elicit moral concern and empathy (Kelman, 1976).

Compared to early studies examining blatant dehumanization in the context of mass violence and war, in more recent fields of research the denial of *humanness* occurs much

more subtly (Haslam & Loughnan, 2014). In the present century, Haslam and colleagues have carried out extensive research on dehumanization, defining humanness precisely (Haslam, 2006; Haslam et al, 2008). Haslam suggests that humanness comprises the two dimensions *uniquely human* and *human nature*. Uniquely human traits are rationality, morality and language, also related to as secondary or refined emotions. These abilities are considered to make us humans unique compared to other life forms, like animals. On the other hand, human nature traits refer to basic human characteristics such as emotionality, aliveness and openness, distinguishing us from inanimate objects, like machines (Haslam, 2006; Haslam et al., 2008). Hence, people can dehumanize others either by likening them to animals, neglecting their uniquely human traits or by likening them to machines, neglecting their human nature traits (Haslam & Loughnan, 2014). *Animalistic dehumanization* involves a vertical comparison, positioning the target below other humans on a developmental or evolutionary scale, akin to animals - impulsive, uncultured, and lacking self-restraint. In contrast, the *mechanistic dehumanization* involves a horizontal comparison, where the target is perceived as distant or dissimilar from others, resembling machines – cold and unemotional (Haslam, 2006). The two forms of dehumanization are illustrated in Figure 1.

Figure 1

Human Uniqueness and Human Nature and their corresponding form of Dehumanization



Note. Retrieved from Haslam, 2006.

Strong empirical evidence was found supporting the existence of the two dimensions of humanness. Ratings on the two dimensions were typically uncorrelated, since the traits in each dimension differ in content. Traits reflecting human uniqueness tend to be viewed as emerging later in development and as varying across cultures, while traits reflecting human nature are perceived to be more essence-like and universal (Haslam et al., 2005). Traits linked to human uniqueness tend to cluster around the agreeableness domain of the Big Five personality dimensions, emphasizing civility and refinement. The characteristic traits of human nature span around the Big Five dimensions Openness, Extraversion and Neuroticism (Haslam, 2008).

Several patterns regarding the ascription of humanness were identified when individuals compare themselves or their group to others. One is *infra-humanization*, a process in which people ascribe to their ingroup more uniquely human traits than to the outgroup. At the same time human nature traits are ascribed equally to the ingroup and outgroup (Leyens et al., 2003; Loughnan & Haslam, 2007). *Infra-humanization* is a subtle

phenomenon, which is not due to ingroup favoritism and occurring without conflict (Haslam, 2006). In contrast to this group-based process, people generally tend to *self-humanize*, ascribing themselves more human nature traits than to other individuals, meanwhile ascribing uniquely human traits equally (Haslam et al., 2005). Although infra-humanization and self-humanization do not explain dehumanization, these processes demonstrate the subtlety of how perceived humanness can easily be changed across individuals and contexts and that the phenomena cannot be separated completely (Leyens et al., 2007). The contrasting phenomenon to dehumanization is *anthropomorphization*. In this process non-human objects, such as pets or deities are attributed typical human characteristics, and are therefore humanized (Haslam et al., 2008).

Further evidence for the dual dimensions of humanness, human nature and human uniqueness, comes from studies investigating how different social categories are implicitly associated with animals or machines. Loughnan and Haslam (2007) found that social categories which are associated with high levels of human nature like artists are more closely linked to animals, showing animalistic dehumanization. At the same time, businesspeople rated high on human uniqueness are more readily linked to automata, representing mechanistic dehumanization.

In other studies on self-humanization findings regarding humanness could be replicated (Haslam & Bain, 2007; Haslam et al., 2008), as participants ascribed more human nature traits, such as emotional depth and interpersonal warmth, to themselves. The effect is distinct from self-enhancement, since participants did attribute human nature traits with a positive and with a negative valence to themselves more readily, but not uniquely human traits. These findings suggest that individuals interpret their flaws as reflections of deep humanity, while seeing others' flaws as deficiencies. The tendency to self-humanize could be significantly eliminated when participants had to compare a target with themselves and not themselves with a target. Focusing on a concrete individual, instead of an average person, also reduces the self-humanizing effect, suggesting that focus and concreteness play a crucial role in the ascription of humanness. Male and female participants attributed more human nature traits to women, than to men. Notably, women were also more closely associated with animals, while men were marginally more associated with robots, than women (Haslam et al., 2008).

These findings could partly be replicated in later studies on objectification, demonstrating that sexualized women are more strongly linked to animals and are attributed fewer uniquely human traits (Vaes et al., 2011; Rudman & Mescher, 2012). The observed effects do not reflect an overt or intentional form of complete dehumanization, such as that seen in extreme contexts like warfare (e.g., World War II). Instead, they represent subtle, automatic, and often unconscious processes that diminish the perceived humanness of the target person. As a result, implicit measures, such as the Implicit Association Test (IAT), have been widely utilized to investigate these nuanced forms of dehumanization (Haslam & Loughnan, 2014; Vaes et al., 2011).

Sexual objectification and dehumanization are closely aligned, but distinct concepts: cognitive objectification refers to a perceptual process wherein a person is not seen as a whole, but as a collection of parts, similar to how objects are perceived (Bernard et al., 2018; Fredrickson & Roberts, 1997). On the other hand, dehumanization concerns the social perception of a person as lacking mind and other human traits (Vaes et al., 2013). Dehumanization may result from or contribute to cognitive objectification (Gervais et al., 2013). Objectification and dehumanization are mutually facilitating and overlapping, but they must be differentiated from one another. Some researchers view objectification and specific aspects of dehumanization, such as animalistic dehumanization, as overlapping or even identical (e.g. Haslam, 2006). However, they are not always the same. For instance, being likened to animals (animalistic dehumanization) or denied human emotions can be dehumanizing without involving objectification. Similarly, people can be sexually objectified, such as in a consensual sexual context, without being dehumanized, as they are still seen as fully human, despite the focus on the body (Gervais et al., 2013). Dehumanization can be considered a consequence of sexual objectification (Cogoni et al., 2021) and researchers generally agree that objectification becomes particularly harmful when it involves the denial of a person's humanity (Nussbaum 1995; Haslam, 2006). Dehumanization reduces moral concern, facilitating aggression, violence and the justification of harmful behavior (Bandura, 1999; Goff et al., 2008; Haslam et al., 2013).

Dehumanization and Mental Attribution

Dehumanization fundamentally involves a diminished perception of a target's psychological depth (Haslam, 2006). Central to this process is the concept of *mental*

attribution. That is the extent to which individuals are perceived as capable of thought, intention, or feeling (Loughnan et al., 2010). This concept becomes particularly salient in the context of sexual objectification, where individuals, especially women, are reduced to their physical appearance, leading to diminished perceived competence and diminished attribution of mental states such as intentionality, emotional depth, and moral status (Heflick & Goldenberg, 2009; Loughnan et al., 2010). To get a holistic picture on dehumanization in the context of sexual objectification, this study investigated the perceived humanness and perceived mind of the targets.

Similar to the distinction between uniquely human traits and human nature in the concept of humanness, the mind perception framework proposes two corresponding dimensions: *mental agency* and *mental experience*, also referred to as *patiency* (Gray et al., 2007). Since the concepts are closely aligned, agency can be associated with uniquely human and experience with human nature (Haslam & Loughnan, 2014). Hence, people can dehumanize others either by likening them to robots, involving a loss of experience, or likening them to animals, involving a loss of agency (Haslam, 2006; Gray et al., 2011).

The differentiation between agency and experience can be traced back to early philosophical theorizing of Aristotle (Gray et al., 2007). Aristotle distinguished between the *theoretical intellect*, which is concerned with contemplation and understanding, and the *practical intellect*, which is directed towards action and decision-making. This bifurcation aligns with contemporary discussions where agency pertains to the capacity for intentional action (paralleling Aristotle's practical intellect) and experience relates to the capacity for perception and feeling (e.g. Gray et al., 2007; Gray et al., 2011). Further Aristotle argued that animals, like humans do perceive and have desires, but humans alone have a sophisticated mind, discriminating humans from animals (Shields, 2020). In *Metaphysics*, Aristotle (1984) differentiates between beings that initiate change (*energeia*) and those that merely undergo it (*pathos*), anticipating contemporary notions of agency and experience. In *Nicomachean Ethics* (Book III) Aristotle (1998) emphasizes on the role of deliberate reasoning in ethical behavior, particularly in rational adults, reflecting early recognition of mental agency as tied to cognitive capacity, a concept echoed in current mind perception research.

Gray et al. (2007) gave this definition for mental agency and mental experience: “Agency is the capacity for self-control, morality, memory, planning; experience is the

capacity to feel fear, hunger, pain, pleasure, and other emotions” (p. 619). Research has shown that dehumanized individuals are often denied these mental capacities (Loughnan et al., 2010).

Although being distinct constructs, the alignment between humanness and mind perception emphasizes that perceiving someone as fully human involves recognizing their capacity to act with intention and to feel. Any reduction in these perceived capacities, particularly in the context of sexual objectification, reflects a denial of personhood. Investigating mental attribution alongside perceived humanness therefore provides a more comprehensive assessment of dehumanization.

Perceptual Objectification and Cognitive Processing of Sexualized Bodies

A substantial body of research on objectification has employed visual paradigms, investigating the inversion effect: people are significantly less accurate and slower at recognizing inverted (i.e., upside-down) depictions of humans compared to upright ones (e.g. Bernard et al., 2015; Cogoni et al., 2018). The inversion typically disrupts holistic configural processing, which is used for perceiving human stimuli. Objects on the contrary are perceived through a local, part-based, analytical processing, which is not disrupted, when depicted invertedly. Hence the inversion effect is not typically observed for objects, such as houses (Bernard et al., 2012; Cogoni et al., 2018).

Whereby personalized depictions of females typically trigger the inversion effect, several studies showed no inversion effect for sexualized females, indicating an analytical process alike to object perception. This difference in perceptual processing is referred to as the *sexualized-body inversion hypothesis* (SBIE) (Bernard et al., 2012; Cogoni et al., 2018). Investigating the SBIE in male targets has yielded further insights. Bernard et al. (2012) found that the inversion effect was present for sexualized female targets but absent for male targets. Picking up on this study, Schmidt and Kistemaker (2015) argued that this discrepancy was due to methodological artifacts. When target symmetry was counterbalanced and statistically controlled, the gender discrepancy disappeared, as an inversion effect was not observed for sexualized male targets. Cogoni et al. (2018) underlined these findings, observing no inversion effect for both female and male sexualized targets. This underscores the importance of stimuli symmetry and furthermore the degree of

nakedness and style, respectively the level of sexualization, triggering different exploration strategies (Cogoni et al., 2018). These findings suggest that people perceive personalized depictions as persons and sexualized ones as objects on a basic cognitive level. Specifically, these findings indicate that the analytical processing style is not inherently tied to the semantic distinction between “object” and “person” but is instead triggered by the perception of sexualized stimuli. Consequently, the term *sexualized* may more accurately capture the perceptual processes involved than the broader label *objectified* (Cogoni et al., 2018).

In a later experiment (Vaes et al., 2020), participants categorized images of males and females - either sexualized or not - as either people or objects. Results showed that sexualized women caused the strongest categorization conflict. This conflict was smooth and dynamic, not abrupt, suggesting a continuous struggle between object and human categorization. Decisions emerge from simultaneous competition between top-down (controlled) and bottom-up (automatic) processes. Hence ambiguous social stimuli, like sexualized human figures, activate multiple categories at once, which then dynamically compete until a final decision is made. Prior research shows that sexualized women are often automatically perceived as object-like (Vaes et al., 2011), thus recognizing them as human may require more deliberate, effortful processing. Importantly, both being a woman and being sexualized, independently increased this conflict, with the greatest effect seen for sexualized women. Both male and female participants showed this effect equally (Vaes et al., 2020). Since dehumanization is primarily an automatic process, it is likely to be especially susceptible to the influence of ingrained social stereotypes, like gender stereotypes.

The Role of Gender Stereotypes in Shaping Dehumanization Patterns

Extensive research has been done on the objectification of women, whereby sexualized women are typically dehumanized, and attributions of competence and mental attributions are diminished (Heflick & Goldenberg, 2009; Loughnan et al., 2010; Vaes et al., 2010). While sexualized women are often perceived in analytic, object-like terms, evidence for the objectification of men remains mixed and context-dependent. Reduced mind attribution was given to male models, whose value is tied to their appearance, when compared to their personalized counterpart. This indicates that objectification might have an equal or even greater effect on the perception of males, compared to females. The found

effects did not vary by participant gender, suggesting that both males and females dehumanize targets similarly (Loughnan et al., 2010).

Although the state of research is complex and not entirely uniform, there are studies indicating that sexualized women are frequently implicitly associated with animals (Vaes et al., 2011; Reynolds & Haslam, 2011). This association seems to be driven by the portrayal in everyday media, where women are frequently portrayed as closely linked to nature, and is observed in both, male and female perceivers (Reynolds & Haslam, 2011). The research herein is based on anthropologist deliberations by Ortner (1974), who stated that across many cultures women are traditionally confined to the domestic sphere, because they are symbolically associated with nature due to their biological roles in reproduction and child-rearing, whereas men lack this natural basis. According to Ortner (1974), men are associated with culture, positioning them in higher-level societal roles, involving politics, religion and art. As a result, men are seen as the natural bearers of the most valued aspects of cultural life, whereas women are positioned within a lower-level, more fragmented societal sphere. This way of thinking upholds gender hierarchies by associating men with elevated cultural significance and women with limited, domestic roles.

Consequently, the prejudice is widespread in Western thinking that women are emotional and irrational, while men are logical and rational. This implies that women should not be leaders or make important decisions and men are not suited for caregiving roles (Eagly & Wood, 2012). These prejudices are considered both a cause and a result of traditional gender roles (Citrin et al., 2004). Overall, the research underscores that although objectification and dehumanization can occur across genders, women are more consistently affected, with cultural and evolutionary narratives reinforcing their association with nature and emotionality, and men with rationality and culture.

In a study using the single-category IAT, researchers found that sexualized women were more strongly associated with animals, than both personalized women and sexualized men (Vaes et al., 2011). Similarly, Rudman and Mescher (2012) found that personalized women were not associated more with animals than personalized men, implying an animalistic dehumanization for sexualized targets, but not for women in general.

Building on Ortner's (1974) discussion of gendered associations with nature and culture, the *Stereotype Content Model* (Fiske et al., 2002) provides further insight into how women and men are perceived through the dimensions of *warmth* and *competence*.

According to the model, women are often stereotyped as high in warmth but low in competence, reflecting nurturing, entailing emotional qualities linked to nature and low status. Men are seen as high in competence but low in warmth, aligning with cultural ideals of agency and high status, respectively power. These stereotypes stem from traditional gender roles (Eagly & Steffen, 1984; Hoffman & Hurst, 1990; Diekmann & Eagly, 2000).

As feminist theorists (e.g. De Beauvoir, 1949; Ortner, 1974) have shown, women have historically been associated with *the natural*, which is understood as emotionality, instinct, and the body. Men have been aligned with culture, reason, and abstraction. This dichotomy is echoed in modern psychological research distinguishing between human uniqueness and human nature (Haslam et al., 2005; Haslam et al., 2008). Furthermore, professions with high status, which are historically mainly occupied by men, are associated with agency. Women are stereotypically attributed *natural instincts* and low status, which are associated with experience (Eagly & Steffen, 1984; Haslam et al., 2008).

When integrating the concept of humanness with the stereotype content model, research suggests that the uniquely human dimension aligns more closely with competence than with warmth (Vaes & Paladino, 2010). Traits associated with human nature, such as emotional vitality and interpersonal warmth, are suggested to be reflective of the *heart*, which aligns more closely with warmth (Haslam et al., 2005).

Lower social status has been shown to correspond with a diminished attribution of uniquely human characteristics (Haslam et al., 2008). Despite being conceptually distinct, humanness and stereotype content may intersect, as both, uniquely human and human nature encapsulate traits tied to warmth and competence, where warmth reflects a prosocial nature associated with human nature, and competence reflects intelligence linked to human uniqueness (Loughnan & Haslam, 2007; Haslam et al., 2008). Groups perceived as highly competent yet low in warmth, are typically regarded as most uniquely human (Vaes & Paladino, 2010). Since this stereotype is apparent for men, this study examined if there are differences in the dehumanization of male and female targets, regarding the dimensions human uniqueness and human nature.

When portrayed in provocative clothing, female targets were attributed fewer agentic mental states and were perceived as less capable of having thoughts and intentions compared to those who were fully clothed. Nevertheless, they were not denied experiential capacities, as they were still seen as equally capable of feeling sensations and emotions (Haslam et al.,

2013). Similar findings were reported by Cogoni et al. (2021). Sexualized women were more strongly associated with physical appearance, while non-sexualized were linked to intelligence. This was accompanied by a differentiated attribution of mental states, namely non-sexualized women were ascribed higher agency, whereas sexualized women were attributed higher experience. Building on these findings, the present study aimed to explore differences between male and female targets regarding the attribution of mental agency and experience.

The Role of Suggestiveness in Triggering Objectification and Dehumanization

As mentioned earlier, people perceive personalized depictions as persons and sexualized as objects on a basic cognitive level. An analytical processing style is triggered by the perception of a sexualized target, thence people objectify. This implies that the degree of sexualization drives objectification and indeed evidence was found for this effect (e.g. Bernard et al., 2012).

Through a longitudinal analysis of *Rolling Stone* magazine covers over the past decades, Hatton and Trautner (2011) revealed that sexualized depictions of both men and women have increased over time. Especially women are shown more frequently in a sexualized manner, and they are increasingly hypersexualized². One criterion for their investigation was the targets' posture. It ranged from neutral postures like standing upright, to more suggestive positions as leaning or raising one arm overhead and finally to blatant sexual poses like lying down or, for women, sitting with their legs spread apart. Subsequent research has confirmed that it is not only the amount of clothing but also the *suggestiveness* of posture that contributes to perceptions of sexualization and dehumanization (e.g. Gray et al., 2011; Bernard et al., 2019). Suggestive postures led to women in revealing clothing being seen as less warm and competent, whereas this effect did not occur for women in less revealing attire. Regardless their clothing, women in suggestive postures were generally attributed less morality. This overall reduction in perceived warmth, competence, and morality can be interpreted as indicative of dehumanization (Bernard & Wollast, 2019).

² 'Hypersexualization' was defined as the combination of various sexualizing elements - such as body posture, degree of nudity, textual hints, and others - that collectively constrain the interpretation of the image to a sexual meaning (Hatton and Trautner, 2011).

Bernard et al. (2019) proposed that posture suggestiveness, rather than the amount of exposed skin or body asymmetry, drives cognitive objectification. Bodies in non-suggestive postures were processed configurally, suggesting recognition of them as whole human forms, regardless of how much skin was shown. In contrast, suggestive postures led to less configural processing, similar to how objects are perceived. Although suggestive postures often coincide with body asymmetry, further testing by Bernard et al. (2019) showed that body asymmetry alone did not cause objectification and that it is rather the suggestiveness of the posture itself that triggers object-like processing.

Gray et al. (2011) demonstrated that a bodily focus does not lead to a general dehumanization, but a *redistribution of mind*, in the sense that sexualized targets are perceived as less agentic, but higher in experience. In a subsequent experiment, they measured the perceived suggestiveness of a female target by asking the participants “How sexually suggestive is the picture [...]?”. They correlated suggestiveness with their initial findings and found that, when perceived suggestiveness increases, the perception of agency decreases, and experience increases. Building on this, our study aimed to replicate and expand these findings by applying the same framework to male targets. We further aimed to extend the findings by not only investigating mental attribution, but also humanness. This broader approach should help to provide a more comprehensive understanding of how sexual suggestiveness contributes to the processes of dehumanization.

Some research has focused on objectification by activating a sex goal. This approach motivated men’s but not women’s dehumanization of female targets. (Vaes et al., 2011). It implies that sexualization of a target is not necessarily required to trigger dehumanization, but activating a sex goal in heterosexual men can be enough to trigger objectification and dehumanization of women. Women who are perceived as more open to casual sex are attributed less mental capacity (Kellie et al., 2019). These findings constitute support for our hypothesis, since suggestiveness is likely to imply sexual availability and elicit (sexual) approach motivations, hence facilitating dehumanization.

Aim of the Study

Given that gender stereotypes and the stereotype content model (competence and warmth) relate to dimensions of humanness and mental attribution, this study explicitly

tested gender differences in dehumanization, examining attributions of uniquely human and human nature traits, as well as attributions of mental agency and experience. We hypothesized, when (automatically) dehumanizing sexualized male targets, their uniquely human traits should remain unaffected, and the dehumanization happens through lower attributions in human nature traits. The opposite was hypothesized for female targets: sexualized female targets are dehumanized through lower attributions in uniquely human traits, whereas human nature traits remain unaffected. Hence, we expected a mechanistic dehumanization for sexualized male and an animalistic dehumanization for sexualized female targets. In a similar vein, we expected a redistribution of mind: sexualized males would be reduced to mental agents, whereas sexualized females would be reduced to mental experiencers. Gender stereotypes are endorsed by both men and women (Haslam et al., 2008). Therefore, we did not expect participant gender to significantly influence the dehumanization process.

Most studies in the field of sexual objectification have relied on images of sexualized and personalized targets, investigating sexual objectification in a hypothetical scenario (e.g., Vaes et al., 2011; Gray et al., 2011; Kellie et al., 2019). To achieve results that better reflect real-life interactions, we employed a real-live paradigm in which participants encountered targets in person. Subsequently, participants rated these targets using questionnaires that included photographs of the same models to support recall and ensure consistency. This real-live scenario should help to show the mechanisms of sexual objectification more accurately, than hypothetical scenarios (FedlmannHall et al., 2012).

Research on sexual objectification reveals a complex interaction between target gender, levels of sexualization and suggestiveness, and how these factors influence perceptions of humanness and the attribution of mental states. Although more adverse consequences for women, than for men, it has been shown that men are dehumanized and hereby stripped off their mental states as well. Since there is scarce and partly conflicting literature on the objectification of men, this study aimed to fill this research gap. Further it aimed to examine the underlying mechanisms and subtle differences in dehumanization and mental attribution of male and female targets, analyzing and comparing the dimensions. Based on the findings of Gray et al. (2011), our experiment included perceived suggestiveness as a possible moderator of dehumanization. Importantly, we did not manipulate suggestiveness directly in this study, as both the sexualized and personalized targets were depicted in identical poses.

Hypotheses:

- H1. Sexualized targets receive lower ratings on the Humanness Scale and the Mental Attribution Scale, compared to their personalized counterparts. There is no difference between male and female targets. There is no difference between the ratings of male and female participants.
- H2. Sexualized male targets are expected to be dehumanized through lower ratings in the subscale human nature traits, compared to the personalized counterpart. There is no significant difference in the subscale uniquely human traits between sexualized and personalized male targets. In contrast, sexualized female targets are expected to be dehumanized through lower ratings in the subscale uniquely human traits, compared to the personalized counterpart. There is no significant difference in the subscale human nature traits between sexualized and personalized female targets.
- H3. Similarly, sexualized male targets will receive lower ratings on the mental experience subscale, compared to the personalized counterpart. Sexualized female targets receive lower ratings on the mental agency subscale, compared to the personalized counterpart.
- H4. Perceived suggestiveness is hypothesized to moderate dehumanization, such that higher suggestiveness ratings will correspond to lower humanness and mental attribution scores for sexualized targets.

Methods

This study was part of a broader research project that included several questionnaires and an MRI investigation. It was previously reviewed and approved by the Ethics Committee of the University of Vienna. All participants provided informed consent before the study began. A participant code was generated upon participant acquisition, to ensure anonymization of the participants. Data collection for this study took place at the *Zahnklinik* (University Clinic of Dentistry Vienna), since the clinic provides access to an MRI. The study was conducted under the supervision of Melanie Michna, MSc. (Department of Clinical and Health Psychology of the University of Vienna).

Procedure

The study included two target gender conditions: in one, the confederates were male, and in the other, they were female. We employed three male and four female models as confederates. This setup allowed for a total of 14 different confederate pairings, to which participants were assigned.

Upon arrival, participants waited outside the entrance alongside two confederates. These confederates were models, who were paid to pose as fellow participants in this study. One confederate wore revealing clothing that emphasized sexualized body parts, while the other was dressed in loose-fitting clothing that concealed the arms, legs, and chest (see Figures 1 & 2). Varying the amount of skin shown has been established as a valid manipulation to elicit objectification (Cogoni et al., 2018; Kellie et al., 2019; Gray et al., 2011). To prevent personal preferences for the confederates' appearances from influencing the results, confederates alternated between wearing either the revealing or the casual outfit. The outfits of the confederates were the same throughout all trials of the experiment. Facial expressions were also controlled.

Figure 2

Example Pictures of a Male Model: Sexualized (Left) and Personalized (Right)



Figure 3

Example Pictures of a Female Model: Sexualized (Left) and Personalized (Right)



The participant and confederates were greeted by two instructors outside the room the experiment was taking place in. As part of the procedure, one instructor escorted the participant into the room and took photographs of the participant, explaining that these images would be used for the confederates' tasks. However, the participants' photos were not actually utilized in the study. The other instructor pretended to take photographs of the confederates outside the room. Since images of the confederates were later shown during the tasks, this step was necessary to maintain the illusion that pictures of all supposed participants had been taken. The photographs of the models had already been taken before the experiment. Instructors were psychology students from the University of Vienna.

Following the photo-taking the confederates were led to another room by one instructor and the participant was given instructions for the experiment. The participant had to perform several tasks in the MRI. Hereby empathy and helping behavior were assessed for a bigger research project. These tasks were not relevant for this study. Afterwards the participants had to complete the questionnaires relevant to this study. The questionnaires had to be filled out on a laptop with an estimated completion time of 15 to 20 minutes, under the supervision of the instructor. Participants had to rate both confederates (sexualized and personalized) on several items. A picture of the concerning confederate was shown, to help

to recall the person. The study was conducted using the SoSci-Survey platform. At the end of the experiment the participants were asked, „What do you think was the purpose of this study?“. Here 14 participants indicated that they thought it had something to do with gender and 15 participants expected it to be about appearance. Although no one could see through the paradigm, 40 % of the participants suspected that it was about gender or appearance. Afterwards, participants received a debriefing regarding its purpose.

Sample

Participants were recruited via social media, mainly Facebook, where we shared the link to our eligibility questionnaire, and the Vienna Cognitive Science Hub's online recruitment tool. Participants were led to believe they were taking part in a study on pain estimation and pain tolerance. This information was given during recruitment. Since our experiment involved the use of an MRI, individuals with a history of heart surgery, as well as individuals with pacemakers, metallic implants, extensive tattoos, hearing aids, permanent makeup, claustrophobia, extreme sensitivity to loud noises or with visual impairment exceeding 1 diopter were excluded. Additionally, individuals with neurological or psychological disorders, those identifying as a diverse gender, and those with a non-heterosexual sexual orientation had to be excluded, because it would have gone beyond the scope of the experiment. Participants had to be able to speak and write German, as the experiment was conducted in German.

To maintain the integrity of our study, which involved a cover story and two confederates within the paradigm, psychology students were excluded, as they are more likely to anticipate the use of deception in psychological research. Participants were required to be between 18 and 35 years old and were evenly distributed across different versions of the experiment in either the male or female targets condition. Each version followed the same procedure, varying question order, to control for order effects and other potential confounds. Participants received compensation of 30 euros for their participation. Additionally, they could get an image of a scan of their brain, if desired.

In total 83 participants were tested between the 10th of October 2022 and the 30th of January 2024. One scan had to be cancelled because the participant felt uncomfortable in the scanner. Another four scans had to be cancelled due to technical issues. Incomplete data sets

were excluded, and the data was analyzed for any obvious irregularities. One participant was excluded from further analysis, because she gave the same responses to each item of the questionnaires. Hence, it is probable that she just clicked through without individually answering the questions. After the exclusion there was a total of $N = 73$ (34 male, 39 female) with an average age of 25 years ($M = 24.9, SD = 3.9$). Out of the 34 male participants, 16 were in the male target condition and 18 in the female target condition. Of the 39 female participants, 19 were in the male target condition and 20 in the female target condition. For the analysis of the Mental Attribution Scale one outlier had to be excluded due to a violation of the normality assumption. Therefore, the sample size for testing H1, H3 and H4 was $N = 72$. Even though we planned to have the same number of participants in each experimental condition, the group sizes slightly differed. This was partly due to the complexity of the study, in which two instructors, two confederates, a qualified user for the MRI and the participant had to be present for approximately three hours in the evening, as the scanner was used by the dental clinic itself during the day. Because of these difficulties, we were unable to reach our initiate recruitment target of 140 participants.

Measurement Tools

Dehumanization was assessed using the Humanness Scale, a trait-rating measure based on Haslam and Bain (2007), which evaluates perceived humanness across 40 trait adjectives. The scale was translated into German, whereby one item was excluded, yielding into a scale comprising 39 items. Participants rated each trait on a 5-point Likert scale, ranging from 1 (*significantly below average* [*viel weniger als der Durchschnitt*]) to 5 (*significantly above average* [*viel mehr als der Durchschnitt*]). As proposed by Haslam et al. (2005) the items correspond to the dimensions uniquely human, human nature and desirability more or less strongly (see table 1). There are eight traits loading high on uniquely human and low on human nature and eight traits loading low on uniquely human and high on human nature; these were used for the deeper analysis of these dimensions. The other items were only included in the first, general analysis, since they are not expected to differentiate the dimensions uniquely human and human nature. The items were framed “Indicate the degree to which the person depicted has the following characteristic compared to the average:”. Example items for uniquely human traits are “polite”, “conscientious” or “hard-hearted” and for human nature “active”, “friendly” or “impulsive”. The polarity of the

items did not have to be reversed, as the valence, whether positive or negative, was not relevant for the analysis. The only thing that mattered was the degree to which a person was rated on the humanness items. The scale is widely known and validated (e.g. Haslam et al., 2008; Martínez et al., 2012). For the reliability analysis, Cronbach's alpha was computed for the sexualized and the personalized confederate condition for the scale in general and each subscale to evaluate internal consistency. Values of Cronbach's alpha were interpreted according to Streiner et al. (2003). Internal consistency was slightly deficient in the sexualized condition ($\alpha = .48$) and satisfactory in the personalized condition ($\alpha = .65$). The subscales uniquely human and human nature failed to reach an acceptable Cronbach's (uniquely human sexualized: $\alpha = .09$, personalized: $\alpha = .13$; human nature sexualized: $\alpha = .45$, personalized: $\alpha = .06$). Hence, the results shall be interpreted cautiously.

Table 1

Thirty-Nine Trait Terms of the Humanness Scale and Their Loadings on the Dimensions Desirability, Uniquely Human, and Human Nature

<i>Desirability</i>	<i>Uniquely Human</i>	<i>Human Nature</i>	<i>Trait Terms</i>
High	High	High	analytics, imaginative, passionate, sympathetic
High	High	Low	broadminded, conscientious, humble, polite, thorough
High	Low	High	active, curious, friendly, helpful, fun-loving
High	Low	Low	contented, comfortable, even-tempered, relaxed, selfless
Low	High	High	frivolous, high-strung, insecure, irresponsible, reserved
Low	High	Low	disorganized, hard-hearted, ignorant, rude, stingy
Low	Low	High	impatient, impulsive, jealous, nervous, shy
Low	Low	Low	passive, simple-minded, timid, uncooperative, unemotional

The two dimensions of humanness form a coherent construct, but are typically uncorrelated (Haslam et al., 2013; Haslam et al., 2005; Bain et al., 2009). To verify this, we calculated the correlations within each confederate condition and found medium correlations (sexualized: $r = .28$; personalized: $r = .31$), suggesting a degree of overlap that partially supports this conceptual distinction.

Mind attribution was assessed using the Mental Attribution Scale (Gray et al., 2011), which was translated into German for this study. It assesses the two subscales mental agency and mental experience through six items on a 6-point Likert scale, ranging from 1 (*not at all [überhaupt nicht]*) to 6 (*very [sehr]*). Mental agency comprises the three items “How capable is this person to plan?”, “How capable is this person to act morally?” and “How capable is this person of self-control?”. Mental experience comprises the three items “How capable is this person of experiencing desire/lust?”, “How capable is this person of experiencing joy?” and “How capable is this person of feeling hunger?”. The reliability of the scale has been reported to be $\alpha = .83$ in the agency index and $\alpha = .56$ in the experience index (Gray et al., 2011). Internal consistency was computed for both confederate conditions for mind attribution in general and for both subscales. Acceptable to good internal consistency was found. The analysis yielded the values $\alpha = .75$ in the sexualized condition and $\alpha = .74$ in the personalized condition for the entire questionnaire. The agency index reported a Cronbach’s alpha of $\alpha = .73$ (sexualized) and $\alpha = .67$ (personalized). The experience subscale showed an acceptable to good internal consistency with $\alpha = .73$ in the sexualized and $\alpha = .69$ in the personalized condition.

Suggestiveness was assessed using the question: “How sexually suggestive is this person?”, based on Gray et al. (2011). Participants responded on a 6-point Likert scale ranging from 1 (*not at all [überhaupt nicht]*) to 6 (*very [sehr]*). In the questionnaire, the German term used was *aufreizend*, which does not translate directly into English, but can be interpreted as *suggestive*, *seductive*, *saucy*, or *tantalizing*, depending on the context.

Study Design and Statistical Analysis

The study employed a 2 (within-subject) x 2 (between-subject) x 2 (between-subject) mixed-model design, whereas the within-subject factor was sexualization of the target

(sexualized vs. personalized) and the between-subject factors were the target gender (male vs. female) and the participant gender (male vs. female). The participant gender was not expected to significantly influence the dependent variables but was included to control for possible effects. In the first step the Humanness Scale (Haslam & Bain, 2007) and the Mental Attribution Scale (Gray et al., 2011) were included as dependent variables in a mixed-model multivariate analysis of variances (MANOVA) to confirm that sexualization leads to a general reduction of humanness and mental state attribution, independent of the target or the participant gender (H1).

To test our second hypothesis, which proposed that sexualized men would be rated lower on human nature traits compared to personalized men (with no significant difference in uniquely human traits), and that sexualized women would be rated lower on uniquely human traits compared to personalized women (with no significant difference in human nature traits), mixed ANOVAs were conducted for both dimensions, to explore uniquely human and human nature traits in detail. For the third hypothesis, which proposed that sexualized men are primarily perceived as mental agents, while sexualized women are primarily perceived as mental experiencers, the same analytic approach was applied. We examined whether sexualized men are rated lower on mental experience traits (while mental agency traits remain at the same level) compared to personalized men and whether sexualized females are rated lower on mental agency traits (while mental experience traits remain at the same level), compared to personalized ones. In these analyses, the focus was on the interaction effect between the within-subject factor (sexualization) and the between-subject factor (target gender).

To examine whether the effect of target sexualization (sexualized vs. personalized) on dehumanization depends on perceived suggestiveness, a repeated-measures MANCOVA was conducted with the confederate condition (sexualized vs. personalized) as a within-subjects factor and perceived suggestiveness as a covariate. The dependent variables were humanness and mental state attribution. This analysis tested the fourth hypothesis (H4), which proposed that perceived suggestiveness moderates the relationship between sexualization and the attribution of humanness and mental states.

Statistical analyses were conducted using SPSS (Version 29.0.1.0). A significance level of $\alpha = .05$ was used throughout, except for Box's *M* test, for which a significance level of $\alpha = .01$ was applied.

Results

Dehumanization of Sexualized Targets in general (H1)

Prior to analyzing the humanness ratings and mental attribution of sexualized and personalized targets, the assumptions for normality were checked. There was one violation for the mental attribution of personalized males. Through graphical exploration (Q-Q plots, boxplots) one outlier was found, causing excessive kurtosis ($kurtosis = 5.19$). For small to medium sample sizes, it is widely accepted that skewness values within ± 1 and kurtosis values within ± 2 indicate approximate normality (e.g., West et al., 1995; Hatem et al., 2022). Consequently, the outlier was excluded, which reduced the kurtosis to an acceptable level ($kurtosis = 0.38$). After exclusion, Shapiro–Wilk tests across the four experimental conditions (male and female targets, sexualized and personalized) were non-significant ($p > .05$; see Appendix Tables A2 and A3), indicating that the assumptions of normality were met.

Means and standard deviations for humanness ratings are presented in Table 2, and those for mental attribution are shown in Table 3. Mean humanness ratings were lower in the sexualized condition than in the personalized condition. In the personalized condition means were higher for male than for female targets. In the sexualized condition means were lower for male than for female targets (see Table 2). Regarding mental attribution, means in the sexualized condition were lower than in the personalized condition. Means of male targets were lower than the means for female targets in both confederate conditions (see Table 3).

Table 2

Descriptive Statistics for Humanness Ratings for Male and Female Confederates in the Sexualized and Personalized Condition

Confederate condition	<i>M</i>	95% <i>CI</i> [LL, UL]	<i>SD</i>
Sexualized			
Overall	2.98	[2.94, 3.03]	0.19
Male	2.96	[2.88, 3.04]	0.23
Female	3.01	[2.96, 3.06]	0.24
Personalized			
Overall	3.04	[2.99, 3.10]	0.23
Male	3.09	[3.02, 3.16]	0.21
Female	3.00	[2.92, 3.08]	0.24

Note. *M* and *SD* represent mean and standard deviation. LL and UL indicate the lower and upper limits of the 95% confidence interval for the mean. Humanness ratings were assessed on a 5-point Likert scale.

Table 3

Descriptive Statistics for Mental Attribution for Male and Female Confederates in the Sexualized and Personalized Condition

Confederate condition	<i>M</i>	95% <i>CI</i> [LL, UL]	<i>SD</i>
Sexualized			
Overall	4.48	[4.31, 4.64]	0.70
Male	4.42	[4.15, 4.68]	0.76
Female	4.53	[4.32, 4.75]	0.65
Personalized			
Overall	4.72	[4.59, 4.86]	0.58
Male	4.71	[4.50, 4.92]	0.59
Female	4.73	[4.55, 4.92]	0.57

Note. *M* and *SD* represent mean and standard deviation. LL and UL indicate the lower and upper limits of the 95% confidence interval for the mean. Mental attribution was assessed on a 6-point Likert scale.

Levene's test indicated that the assumption of homogeneity of error variances was violated for humanness in the sexualized condition ($p = .022$). However, given that group sizes were relatively equal, this violation is not considered critical (Davis, 2010; Field, 2018). For all other variables, the test was not significant: humanness in the personalized condition ($p = .077$), mental attribution in the sexualized condition ($p = .709$), and mental attribution in the personalized condition ($p = .559$).

Unlike the conventional significance level of .05, a more conservative threshold of .01 was applied for the Box's M test, since several authors have suggested that the test should not be interpreted using the .05 level, but rather more stringent cutoffs such as .025 or .01 (Mertler, 2004), or even .001 (Verma, 2015; Warner, 2012). The Box's M test of equality of covariance matrices was not significant ($F(30, 11527.44) = 1.36, p = .093$). Thus, the assumption of homogeneity of covariance matrices was considered met, and the MANOVA results could be interpreted accordingly.

The mixed MANOVA revealed that sexualized targets were attributed significantly less humanness than personalized ones (Wilks' $\Lambda = .111, F(1, 68) = 544.01, p < .001, \eta^2_p = .889$). Similar results were observed for mental attribution: sexualized targets were attributed significantly less mind than personalized targets (Wilks' $\Lambda = .841, F(1, 68) = 12.86, p < .001, \eta^2_p = .159$).

There was no effect of target gender ($F(1, 68) = 0.18, p = .670, \eta^2_p = .003$). There was no significant main effect of the participant gender either ($F(1, 68) = 0.24, p = .626, \eta^2_p = .004$). As this analysis aimed to examine general effects of sexualization across conditions, only the main effects were considered.

Uniquely Human and Human Nature Attributions (H2)

Before analyzing uniquely human and human nature traits across the conditions, using two mixed ANOVAs, the assumptions of normality were checked. Although several variables failed to meet the Shapiro-Wilk test, the assumptions of normality appear only slightly violated. This conclusion is supported by graphical inspection (Q-Q plots and boxplots), as well as skewness and kurtosis values, which indicated relatively normal distributions based on conventional cutoffs (see Appendix Table A4). Only for uniquely human traits of personalized men, the distribution was marginally leptokurtic ($kurtosis =$

2.04) which is not ideal, but still within acceptable limits (Curran et al., 1996; West et al., 1995). Means and standard deviations are presented in Table 4.

Table 4

Descriptive Statistics for the Subscales Uniquely Human and Human Nature for Male and Female Confederates in the Sexualized and Personalized Condition

Confederate condition	Uniquely Human			Human Nature		
	<i>M</i>	95% <i>CI</i> [LL, UL]	<i>SD</i>	<i>M</i>	95% <i>CI</i> [LL, UL]	<i>SD</i>
Sexualized						
Overall	2.95	[2.89, 3.01]	0.27	3.16	[3.07, 3.25]	0.38
Male	2.96	[2.86, 3.05]	0.28	3.16	[3.01, 3.30]	0.42
Female	2.94	[2.86, 3.03]	0.26	3.16	[3.05, 3.28]	0.35
Personalized						
Overall	3.00	[2.94, 3.07]	0.28	3.08	[3.01, 3.14]	0.29
Male	3.01	[2.89, 3.12]	0.33	3.14	[3.05, 3.24]	0.28
Female	3.00	[2.92, 3.07]	0.23	3.02	[2.92, 3.11]	0.28

Note. *M* and *SD* represent mean and standard deviation. LL and UL indicate the lower and upper limits of the 95% confidence interval for the mean. Uniquely human and human nature were assessed on a 5-point Likert scale.

For uniquely human traits, Levene's test was not significant for either the sexualized condition ($p = .418$) or the personalized condition ($p = .488$), indicating that the assumption of homogeneity of variances was met. The Box's *M* test was not significant either, suggesting equality of covariance matrices ($F(9, 48449.88) = 1.49, p = .146$). Results of the mixed ANOVA showed that uniquely human traits did not significantly differ between the confederate conditions ($F(1, 69) = 2.07, p = .155, \eta^2_p = .029$), nor between male and female targets ($F(1, 69) = 0.05, p = .824, \eta^2_p = .001$). The hypothesized interaction between sexualization and target gender was not supported, as the interaction effect was non-significant ($F(1, 69) = 0.00, p = .965, \eta^2_p = .000$). There was no main effect of participant gender either ($F(1, 69) = 0.65, p = .421, \eta^2_p = .009$).

For human nature traits, Levene's test was not significant for either confederate condition (sexualized: $p = .312$; personalized: $p = .435$), indicating that the assumption of equal variances was met. Similarly, Box's M test was non-significant ($F(9, 48449.88) = 1.39, p = .185$), suggesting equality of covariance matrices. The mixed ANOVA revealed no significant difference in human nature trait ratings between the sexualized and personalized conditions ($F(1, 69) = 2.31, p = .133, \eta^2_p = .032$) and no significant differences regarding target gender ($F(1, 69) = 0.71, p = .404, \eta^2_p = .010$). There was no interaction effect between sexualization and target gender ($F(1, 69) = 1.89, p = .173, \eta^2_p = .027$). There was also no main effect of participant gender ($F(1, 69) = 1.87, p = .176, \eta^2_p = .026$).

Mental Agency and Mental Experience Attributions (H3)

Ahead of testing the third hypothesis, assumptions were checked. Since the Shapiro-Wilk statistics revealed significant results for several variables, skewness and kurtosis were checked. In mental agency of personalized males, skewness ($skewness = -1.71$) and kurtosis ($kurtosis = 5.94$) exceeded the norm dramatically. As indicated by visual inspection, the same outlier had to be excluded, as in the first analysis, yielding to satisfactory parameters in this regard ($skewness = 0.37$; $kurtosis = -1.05$), thence assumptions for normality were considered as given (see Appendix Table A5). Means and standard deviations are presented in Table 5.

Table 5

Descriptive Statistics for Mental Agency and Mental Experience for Male and Female Confederates in the Sexualized and Personalized Condition

Confederate condition	<i>Mental Agency</i>			<i>Mental Experience</i>		
	<i>M</i>	95% <i>CI</i> [LL, UL]	<i>SD</i>	<i>M</i>	95% <i>CI</i> [LL, UL]	<i>SD</i>
Sexualized						
Overall	4.31	[4.12, 4.51]	0.84	4.66	[4.45, 4.86]	0.87
Male	4.26	[3.93, 4.60]	0.97	4.57	[4.24, 4.90]	0.94
Female	4.34	[4.10, 4.58]	0.72	4.72	[4.45, 4.99]	0.81
Personalized						
Overall	4.85	[4.67, 5.02]	0.75	4.52	[4.31, 4.71]	0.85
Male	4.75	[4.54, 4.97]	0.62	4.67	[4.38, 4.95]	0.82
Female	5.03	[4.82, 5.23]	0.62	4.44	[4.18, 4.70]	0.78

Note. *M* and *SD* represent mean and standard deviation. LL and UL indicate the lower and upper limits of the 95% confidence interval for the mean. Mental agency and mental experience were assessed on a 6-point Likert scale.

The assumption of homogeneity of error variances was met for mental agency, as indicated by Levene's test, $p = .544$ for the sexualized condition and $p = .542$ for the personalized condition. Equality of covariance matrices was also met, as indicated by the Box's *M* test ($F(9, 43133.50) = 1.03, p = .415$). Mental agency was significantly lower for sexualized targets, compared to personalized targets ($F(1, 68) = 35.85, p = .001, \eta^2_p = .345$). There was no difference regarding agency between male and female targets ($F(1, 68) = 1.43, p = .236, \eta^2_p = .021$). No interaction between sexualization and target gender on mental agency was found ($F(1, 68) = 1.19, p = .278, \eta^2_p = .017$). There was no significant effect of participant gender on agency attribution ($F(1, 68) = 0.64, p = .426, \eta^2_p = .009$).

For mental experience, the assumption of equal error variances was confirmed by Levene's test ($p = .549$ for the sexualized condition and $p = .062$ for the personalized condition). Equality of covariance matrices was supported by Box's *M* test ($F(9, 48449.88) = 1.32, p = .219$). Mental experience did not vary significantly between

the sexualized and personalized targets ($F(1, 69) = 1.63, p = .206, \eta^2_p = .023$). There was no significant main effect of target gender ($F(1, 69) = 0.00, p = .982, \eta^2_p = .000$). No interaction effect between sexualization and target gender on mental experience was found ($F(1, 69) = 1.41, p = .239, \eta^2_p = .020$). The participant gender did not significantly affect experience attribution either ($F(1, 69) = 0.02, p = .885, \eta^2_p = .000$).

Perceived Suggestiveness as a Moderator of Dehumanization (H4)

The final analysis tested the moderating role of perceived suggestiveness on dehumanization. As in prior analyses the Shapiro-Wilk statistic was significant for mental state attribution in the personalized condition, indicating a deviation from normality ($W = .928, p < .001$). After visual exploration, the same outlier as in the prior analyses was excluded from further evaluation. After exclusion, Shapiro-Wilk statistics only indicated violation of the assumption of normality for the covariate suggestiveness (see Appendix Table A6). But since each group contained more than 30 participants and were relatively equal in size, this violation is not critical (Field, 2018). Further skewness and kurtosis were close to zero, indicating Normality (see Appendix Table A6). A non-significant Box's M test indicated equality of covariance matrices ($F(3, 3703520.99) = 1.46, p = .224$). Levene's test confirmed that the assumption of equal error variances was satisfied for humanness ($p = .162$) and mental attribution ($p = .090$).

Results revealed a significant main effect of perceived suggestiveness, indicating that targets perceived as more suggestive were rated as less human and were attributed fewer mental states, Wilks' $\Lambda = .919, F(2, 140) = 6.19, p = .003, \eta^2_p = .081$. However, the interaction between sexualization and suggestiveness was not significant, suggesting no moderation effect (Wilks' $\Lambda = .973, F(2, 140) = 1.95, p = .146, \eta^2_p = .027$). The previously significant effect of sexualization was no longer present when suggestiveness was included as a covariate (Wilks' $\Lambda = .991, F(2, 140) = 0.64, p = .529, \eta^2_p = .009$).

Follow-up analyses showed that suggestiveness significantly predicted lower mental state attribution, $F(1, 141) = 12.45, p < .001, \eta^2_p = .081$, but not humanness, $F(1, 141) = 0.46, p = .498, \eta^2_p = .003$. The interaction between sexualization and suggestiveness was not significant for mental state attribution ($F(1, 141) = 1.10, p = .296, \eta^2_p = .008$), but showed a marginal trend for humanness, ($F(1, 141) = 3.32, p = .071, \eta^2_p = .023$)

suggesting a possible moderation effect that did not reach conventional levels of significance.

Discussion

In this study we aimed to replicate prior findings that sexualized targets are dehumanized and examined if this process is similar for male and female targets. We then examined this process in detail, taking a deeper look at the subdimensions of humanness and mental attribution, ascertaining if there are differences in these regarding the target gender. We further hypothesized that the suggestiveness of the target would be a key factor driving the dehumanization process.

Firstly, we could replicate previous findings, that sexualized targets are dehumanized, by a reduction of human trait attribution and a reduction of mental state attribution. The results of the MANOVA revealed that this process happens towards male and female targets. The current study implies that dehumanization of men and women happens to a similar extent, which is in line with prior studies (Loughnan et al., 2010; Cole et al., 2013). Further, this study helps to consolidate the assumption that men and women dehumanize others to the same extent, which has already been shown in former studies (e.g. Vaes et al., 2020; Bernard et al., 2012).

Regarding the second hypothesis, we did not observe differences in uniquely human and human nature traits between sexualized and personalized targets, nor male and female targets. These novel findings indicate that there are hardly any differences regarding the dehumanization of sexualized males and females and that dehumanization is not caused by stereotypes. As Ortner (1974) stated: “Ultimately, it must be stressed again that the whole scheme is a construct of culture rather than a fact of nature. Woman is not ‘in reality’ any closer to (or further from) nature than men – both have consciousness, both are mortal” (p. 87). Since we did not find differences in target gender regarding human uniqueness and human nature, this study suggests, that participants did not apply different heuristics to dehumanize men and women, but similar ones. While this does not diminish the seriousness of the phenomenon, it may facilitate future research on objectification and the development of targeted societal interventions.

Alternatively, the insignificant results, contradicting our hypothesis, may stem from the utilized measurement tools. Since neither uniquely human nor human nature traits were able to distinguish between sexualized and personalized targets in general, it is likely that the observed dehumanization stems from reductions in other items on the scale. Another explanation could be that the differences may be too subtle to detect with the current measures. This suggests that a more comprehensive scale may be necessary to capture nuanced variations in uniquely human and human nature attribution, if there are any.

Another potential reason for the absence of the hypothesized findings may lie in the composition of our sample, which consisted of students with an average age of 25 years, who might not follow conservative gender roles. As Steward et al. (2000) found, participants with a progressive attitude towards women were better in individuating them, due to their belief that it is important to improve the status of women. In contrast to that, participants with traditional attitudes were better in individuating male targets, stemming from their belief that men occupy a higher status. Future research should address this intriguing question, by comparing young and old people or people with progressive and traditional attitudes. It is possible that the hypothesized patterns of dehumanization may be more applicable to individuals with traditional views or older populations, particularly given the observed decline in adherence to traditional gender roles over recent decades (Diekmann & Eagly, 2000).

Similar to our findings on humanness, our hypothesis regarding target gender differences in mental agency and mental experience was not supported. Mental agency and mental experience did not vary by target gender. And as expected it did not vary by participant gender either. These results corroborate the assumption that the dehumanization of male and female targets might be more similar than previously assumed.

Although our findings did not fully align with our hypothesis, we observed a significant decrease in agency attribution for sexualized targets. While the attribution of experiential capacities (i.e., emotional or sensory states) to sexualized targets did not reach statistical significance, the direction of the means suggests a subtle trend toward increased experience attribution. This pattern is consistent with prior research by Gray et al. (2011), which found that focusing attention on a target's body, opposed to their personality, tends to redistribute mind perception: reducing perceived agency while increasing perceived experience. These findings align with the theoretical notion that objectification does not

necessarily result in a blanket denial of mental capacities but rather shifts how those capacities are perceived. In this case, sexualized targets may be seen as more emotionally reactive or sensually attuned, but less capable of intentional and moral thought, an imbalance that reflects animalistic dehumanization.

The current study also explored whether the dehumanization of sexualized targets is influenced by how suggestive these targets are perceived to be. While our initial analysis confirmed that sexualized targets were generally perceived as less human and were attributed fewer mental states, these effects were further examined using a repeated-measures MACNOVA with perceived suggestiveness as a covariate. The findings highlight the pivotal role of perceived suggestiveness in the dehumanization of targets. Specifically, individuals perceived as more suggestive were attributed significantly fewer mental states and were rated as less human, supporting the notion that suggestiveness itself, rather than sexualization alone, may be a key driver of dehumanization. This interpretation is reinforced by the disappearance of the previously significant main effect of sexualization when suggestiveness was controlled for, pointing toward a possible mediation effect: sexualization increases perceived suggestiveness, which in turn reduces mind attribution and perceived humanness. Notably, follow-up analyses revealed that perceived suggestiveness significantly predicted lower mental state attribution, supporting the idea of a mediation model for mental attribution. In contrast, although suggestiveness did not significantly predict humanness directly, a marginal interaction with sexualization suggests a possible moderating role in the dehumanization process. These nuanced findings underscore the importance of subjective perceptions in shaping social cognition and suggest that interventions aimed at reducing dehumanization may benefit from addressing how individuals interpret and respond to perceived suggestiveness, rather than focusing solely on objective sexualization.

Negative attitudes towards promiscuity contribute to the dehumanization of sexually open women (Kellie et al., 2019). The dehumanization process can be enforced by the activation of a sex goal (Vaes et al., 2011). These findings highlight the insidious nature of dehumanization as a subtle and automatic process. Women who are perceived as sexually open are often seen as attractive and desirable, but are denied full humanity at the same time, encouraging hostile or aggressive behavior (Blake et al., 2016). Given that perceived suggestiveness plays a central role in this dynamic, the present study offers important insight into this paradoxical and harmful pattern of behavior that remains pervasive in society.

Although a clear effect of suggestiveness on dehumanization was found for both men and women (see Appendix Extended Statistical Analysis), it is likely that the reasons for dehumanization differ by gender. For female targets, male dehumanization appears to be driven by sexual approach tendencies, while same-sex dehumanization among women may be influenced by negative biases toward attractive females, potentially stemming from perceived competition (Kellie et al., 2019; Vaes et al., 2011). Future research should address, whether these patterns hold for both cross-gender and same-sex dehumanization among heterosexual participants, particularly by including male targets. Given that our study found no significant gender differences in overall dehumanization, similar patterns may emerge for male targets. Including homosexual participants in future studies would also provide valuable insight into whether this process is primarily shaped by gender dynamics or by sexual orientation.

Although our findings indicate that sexualized male and female targets are dehumanized similarly, it is important to highlight that this work does not aim to equate the experiences of men and women, nor downplay the reality of ongoing sexism and patriarchal structures. Women are objectified and therefore probably also dehumanized more frequently than men in everyday contexts. Furthermore, women are disproportionately affected by the harmful consequences, stretching from subtle actions like the objectifying gaze to more severe outcomes, including sexual harassment, aggression and even rape (Fredrickson & Roberts, 1997; Loughnan et al., 2010; Rudman & Mescher, 2012). This study aimed to uncover the subtle psychological mechanisms underlying objectification in order to contribute to a better understanding of these dynamics and support efforts to challenge structural inequalities.

Limitations and Implications for Future Research

As is common in psychological research, this study also shares the limitation that its sample consisted of WEIRD³ participants (Henrich et al., 2010). This may be particularly relevant in the context of sexual objectification, since the phenomenon is expected to be more prevalent in Western countries, compared to non-Western societies (e.g., Japan, Pakistan and India; Haslam et al., 2013). However, more recent cross-cultural research, comparing Western (Belgian) and Eastern (Thai) populations found no differences in the

³ WEIRD refers to populations that are western, educated, industrialized, rich and democratic, dominating research samples in psychology and may not represent the broader global population (Henrich et al., 2010).

dehumanization of sexualized targets, indicating that dehumanization is a more universal rather than culture-bound phenomenon (Wollast et al., 2018). Due to practical constraints, only heterosexual male and female participants were included in the present study. As previously mentioned, including individuals of diverse sexual orientations, particularly homosexual participants, could offer valuable insights into the underlying mechanisms of sexual objectification and dehumanization. Furthermore, given that gender is not limited to a binary framework, this reveals a substantial research gap that future studies should aim to address. It is also important to note that all models used as stimuli were White, which further limits the generalizability of the findings.

Another limitation of the current study - as well as many others in the field of sexual objectification - concerns the selection of models. In order to effectively trigger sexual objectification, visual stimuli (i.e., the models) were required to conform to specific beauty standards. While necessary for experimental control, these criteria are not representative of the average population. Hence, it was challenging to recruit male models who met the inclusion criteria (e.g., visibly muscular upper arms), as most men do not fit these requirements. This limitation may restrict the generalizability of our findings to more typical or diverse body types.

The current study consists of a relatively small sample size, which is due to the complexity of the study design. Each session required the attendance of six individuals (the participant, two experimenters, a qualified MRI operator and two models). Given the limited availability of scanning sessions, cancellation by any individual meant the session had to be rescheduled, requiring significant logistical effort and the loss of a scanner slot. Additionally, several sessions were aborted due to technical malfunctions or participant discomfort during scanning. Consequently, we were unable to reach a targeted sample size of 140 participants. Furthermore, we did not achieve a perfectly balanced gender distribution, although we came close. For future research, a larger sample size might be mandatory to detect subtle differences in dehumanization measures, especially those targeting nuanced constructs such as uniquely human and human nature. Regarding our findings on suggestiveness, future research may further explore the potential mediating role of perceived suggestiveness using formal mediation models in larger samples.

Another important limitation involves the measurement tools used. The subscales for uniquely human and human nature traits, as well as for mental agency and mental experience, contained relatively few items. While the overall Humanness Scale produced significant results in assessing the dehumanization of objectified targets, the subdimensions failed to do so. Furthermore, the internal consistency (as measured by Cronbach's alpha) for the uniquely human and human nature subscales fell below acceptable thresholds. This proposes a need to develop more extensive and psychometrically robust instruments, with an extended item pool for each dimension. Additionally, creating and validating these questionnaires in additional languages would not only facilitate cross-cultural comparisons but also expand their applicability to a broader range of cultural and linguistic contexts and thereby broaden the generalizability of findings beyond English-speaking contexts.

Future studies should prioritize the development and validation of nuanced measurement tools capable of capturing both overt and subtle forms of dehumanization across diverse contexts and cultures. Dehumanization often operates at an implicit level. Hence, relying solely on self-reporting instruments, such as Haslam's Humanness Scale, may underestimate its prevalence and narrow down its manifestations. To address this, several studies have incorporated implicit measures like the IAT to uncover subtle biases (e.g., Paladino et al., 2002; Rudman & Mescher, 2012). A study by Viki et al. (2006) demonstrated the utility of the IAT in detecting automatic associations between outgroups and animal-related concepts.

Martínez et al. (2007) offered a compelling model by employing a dual-method approach that combines both explicit and implicit measures. Their study used paper and pencil tasks where participants matched ingroup and outgroup surnames with human-, animal-, or machine-related words, effectively distinguishing between animalistic and mechanistic dehumanization. This was complemented by IATs, which confirmed these associations at a more automatic, unconscious level. Such a multi-method framework not only enhances the sensitivity of dehumanization measurement but may also help to gain insights into subtle nuances in the dehumanization process. In relation to our study, it can be cautiously suggested that this kind of approach could differentiate the dehumanization of male and female targets by revealing potential differences in the prevalence of animalistic versus mechanistic dehumanization, if there are any. Hence, integrating explicit and implicit tools in this way may offer a more comprehensive and valid assessment of dehumanization while also helping to minimize bias.

Although the mind perception framework proposed by Gray et al. (2007) was well elaborated and has been widely accepted in dehumanization research, Weisman et al. (2017) argued that mind perception cannot be fully captured by the two dimensions of agency and experience but should be understood as a three-dimensional construct. According to the model, the three fundamental components of mental life are capacities either related to the *body*, the *heart* or the *mind*. Each of these dimensions encompasses aspects of both agency and experience. Future research could integrate these findings when assessing mental attribution in the scope of dehumanization, using more extensive questionnaires capable of assessing mental attribution in both two- and three-dimensional frameworks. This approach may help to triangulate data and reveal more nuanced differences in how mental capacities are perceived.

Conclusion

This study contributed to the broad and varied field of objectification research by employing a real-life interaction paradigm and focusing specifically on dehumanization as the central and malicious component of objectification. Unlike many previous studies that rely on static images and hypothetical scenarios, this design allowed for a more ecologically valid understanding of how individuals perceive and dehumanize others in real-world-like encounters. Moreover, the use of multiple questionnaires enabled a more holistic assessment of participants' perceptions of targets, including both humanness traits and mental state attribution. This work replicated and integrated prior findings: sexualized male and female targets are dehumanized, through a reduction of human trait attribution and a reduction of mental state attribution. This process seems to be triggered by the perception of suggestiveness of the target.

Future research should investigate the subtle mechanisms of dehumanization, particularly in how it differentially affects gendered targets and is influenced by contextual and perceptual variables. A deeper understanding of these dynamics can inform the development of evidence-based interventions aimed at reducing objectification, stigmatization and discrimination in society. In the context of sexual objectification, awareness and intervention programs could bring more safety to women, respectively

FLINTA*s⁴, especially regarding a high rate of gender-based violence and feminicides in Austria and worldwide.

Ultimately, scientific research in this area must contribute to broader societal goals. By unraveling the psychological processes underlying dehumanization, we take a step toward building a more inclusive, just and humane society; one in which the dignity of *every* individual is upheld, and respect, safety and equality are put into practice, not merely treated as privileges reserved for a selected group.

⁴ FLINTA* is a German acronym for female, lesbian, intersex, non-binary, trans-, and agender. The * serves as a placeholder for all non-binary gender identities. The term is primarily utilized within the German-speaking context. (Jochum & Winter, 2023).

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Appendix

Abstract

This study provides a broad theoretical background on dehumanization in the context of sexual objectification, showcasing the constructs objectification, dehumanization and mental attribution, tracing their roots in early philosophical thinking. It confirms prior findings in the research area, showing that male and female targets are dehumanized to a similar degree, regardless of the gender of the participants. Dehumanization and mental attribution are examined in detail by analyzing their two underlying dimensions: uniquely human and human nature traits, constituting humanness, and mental agency and mental experience or patiency, constituting mind attribution. Contrary to our hypotheses, no differences were found between male and female targets in terms of mechanistic versus animalistic dehumanization. Additionally, this study includes the perceived suggestiveness of the targets as a factor influencing dehumanization. The findings suggest that perceived suggestiveness, rather than sexualization per se, plays a key role in driving dehumanization, particularly by reducing mental state attribution. These results offer new insights into the subtle mechanisms underlying sexual objectification and highlight the importance of subjective perception in shaping social judgments.

Zusammenfassung

Diese Studie bietet einen umfassenden theoretischen Hintergrund zur Dehumanisierung im Kontext der sexuellen Objektifizierung. Es werden die zentralen Konstrukte Objektifizierung, Dehumanisierung (bzw. Entmenschlichung) und mentale Zuschreibung vorgestellt und ihre Wurzeln im frühen philosophischen Denken aufgezeigt. Aufbauend auf bestehenden Erkenntnissen zeigt die Studie, dass männliche und weibliche Zielpersonen in vergleichbarem Maße dehumanisiert werden, unabhängig vom Geschlecht der beurteilenden Personen. Dehumanisierung und mentale Zuschreibung werden anhand zweier grundlegender Dimensionen differenziert analysiert: *uniquely human* und *human nature*, die die Menschlichkeit konstituieren, und *mental agency* und *mental experience*, die die Zuschreibung mentaler Zustände bilden. Entgegen unseren Hypothesen wurden keine Unterschiede zwischen männlichen und weiblichen Zielpersonen bezüglich der mechanistischen und animalistischen Dehumanisierung festgestellt. Darüber hinaus wird in dieser Studie die wahrgenommene Suggestivität („Wie aufreizend ist diese Person?“) als Einflussfaktor für die Dehumanisierung untersucht. Die Ergebnisse deuten darauf hin, dass die wahrgenommene Suggestivität - und nicht die Sexualisierung an sich - eine Schlüsselrolle bei der Entmenschlichung spielt, insbesondere durch eine reduzierte Zuschreibung mentaler Zustände. Diese Erkenntnisse liefern neue Einblicke in die subtilen Mechanismen, die der sexuellen Objektifizierung zugrunde liegen, und unterstreichen die Bedeutung der subjektiven Wahrnehmung bei der Bildung sozialer Urteile.

Resumen

Este estudio ofrece un amplio marco teórico sobre la deshumanización en el contexto de la objetivación sexual, abordando los constructos de objetivación, deshumanización y atribución mental, y rastreando sus raíces en el pensamiento filosófico temprano. Con base en investigaciones previas, el estudio confirma que tanto los sujetos masculinos como femeninos son deshumanizados en un grado similar, independientemente del género de los participantes. La deshumanización y la atribución mental se analizan en detalle a través de sus dos dimensiones subyacentes: por un lado, los rasgos exclusivamente humanos y los rasgos de la naturaleza humana, que conforman la percepción de humanidad; y por otro, la agencia mental y la experiencia (o paciencia) mental, que constituyen la atribución de mente. Contrario a nuestras hipótesis iniciales, no se encontraron diferencias significativas entre sujetos masculinos y femeninos respecto a los tipos de deshumanización mecanicista y animalista. Además, el estudio incorpora la *sugestividad* percibida de los objetivos (“¿Cuán sexualmente sugerente es esta persona?”) como factor que influye en la deshumanización. Los resultados sugieren que la sugestividad percibida - más que la sexualización en sí - desempeña un papel clave en la deshumanización, principalmente al reducir la atribución de estados mentales. Estos hallazgos aportan nuevos conocimientos sobre los sutiles mecanismos que subyacen a la objetivación sexual.

Questionnaires

Humanness Scale

Table A1

German Translations of the 39 Trait Terms from the Humanness Scale and their Loadings on the Dimensions

<i>Desirability</i>	<i>Uniquely Human</i>	<i>Human Nature</i>	<i>Trait Terms</i>
High	High	High	analytisch, einfallsreich, leidenschaftlich, mitfühlend
High	High	Low	großzügig, gewissenhaft, bescheiden, höflich, sorgfältig
High	Low	High	aktiv, neugierig, freundlich, hilfsbereit, lebenslustig
High	Low	Low	zufrieden, angenehm, ausgeglichen, entspannt, selbstlos
Low	High	High	albern, überempfindlich, unsicher, verantwortungslos, reserviert
Low	High	Low	desorganisiert, hartherzig, unwissend, unhöflich, geizig
Low	Low	High	ungeduldig, impulsiv, eifersüchtig, nervös, schüchtern
Low	Low	Low	passiv, einfach, befangen, unkooperativ, unemotional

Mental Attribution Scale

Agency Ratings

Wie fähig ist diese Person zu planen?

Wie fähig ist diese Person moralisch zu handeln?

Wie fähig ist diese Person zur Selbstkontrolle?

Experience Ratings

Wie fähig ist diese Person Hunger zu verspüren?

Wie fähig ist diese Person Lust zu verspüren?

Wie fähig ist diese Person Freude zu verspüren?

Descriptive Statistics

Table A2

Skewness, Kurtosis and Results of the Shapiro-Wilk Test for Normality in Humanness Ratings for Male and Female Targets by Condition

Confederate condition	<i>n</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>W</i>	<i>p</i>
Sexualized					
Male	34	-0.16	0.14	.974	.575
Female	38	-0.51	1.37	.972	.458
Personalized					
Male	34	0.06	-0.40	.981	.802
Female	38	-0.02	0.73	.960	.183

Note. *n* is the group size, *W* is the Shapiro-Wilk statistics and *p* is the significance value.

Table A3

Skewness, Kurtosis and Results of the Shapiro-Wilk Test for Normality in Mental Attribution for Male and Female Targets by Condition

Confederate condition	<i>n</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>W</i>	<i>p</i>
Sexualized					
Male	34	-0.04	0.22	.983	.856
Female	38	-0.26	0.19	.973	.471
Personalized					
Male	34	-0.27	0.38	.981	.791
Female	38	0.21	-0.31	.979	.686

Note. *n* is the group size, *W* is the Shapiro-Wilk statistics and *p* is the significance value.

Table A4

Skewness, Kurtosis and Results of the Shapiro-Wilk Test for Normality in Uniquely Human and Human Nature for Male and Female Targets by Condition

Confederate condition	<i>n</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>W</i>	<i>p</i>
<i>Uniquely Human</i>					
Sexualized					
Male	35	-0.33	-0.96	.948	.099
Female	38	-0.84	0.98	.932	.023
Personalized					
Male	35	0.60	2.04	.915	.010
Female	38	-0.10	0.94	.970	.404
<i>Human Nature</i>					
Sexualized					
Male	35	0.38	1.19	.940	.054
Female	38	-0.84	1.89	.931	.021
Personalized					
Male	35	-0.58	1.73	.942	.062
Female	38	-0.02	-0.17	.955	.130

Note. *n* is the group size, *W* is the Shapiro-Wilk statistics and *p* is the significance value.

Table A5

Skewness, Kurtosis and Results of the Shapiro-Wilk Test for Normality in Mental Agency and Mental Experience for Male and Female Targets by Condition

Confederate condition	<i>n</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>W</i>	<i>p</i>
<i>Mental Agency</i>					
Sexualized					
Male	34	-0.60	0.65	.951	.134
Female	38	0.00	-0.93	.953	.108
Personalized					
Male	34	0.04	-1.05	.933	.037
Female	38	0.12	-1.16	.927	.016
<i>Mental Experience</i>					
Sexualized					
Male	34	-0.46	-0.73	.942	.072
Female	38	-0.38	0.05	.962	.216
Personalized					
Male	34	-0.19	-0.27	.966	.367
Female	38	-0.20	-0.11	.971	.409

Note. *n* is the group size, *W* is the Shapiro-Wilk statistics and *p* is the significance value.

Table A6

Skewness, Kurtosis and Results of the Shapiro-Wilk Test for Normality in Humanness Ratings, Mental Attribution and Suggestiveness Ratings for Sexualized and Personalized Targets

Confederate condition	<i>n</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>W</i>	<i>p</i>
<i>Humanness</i>					
Sexualized	73	-0.39	0.72	.980	.296
Personalized	72	-0.08	0.33	.985	.552
<i>Mental Attribution</i>					
Sexualized	73	-0.19	0.16	.980	.284
Personalized	72	-0.03	-0.03	.987	.654
<i>Suggestiveness</i>					
Sexualized	73	-0.33	-0.60	.925	<.001
Personalized	72	0.56	0.06	.914	<.001

Note. *n* is the group size, *W* is the Shapiro-Wilk statistics and *p* is the significance value.

Extended Statistical Analysis

To check whether the relation between Suggestiveness and dehumanization (i.e., humanness ratings and mental attribution) varied by target gender, an additional repeated-measures MANCOVA was conducted, with target gender as a fixed factor. The results revealed no significant interaction between suggestiveness and target gender (Wilks' $\Lambda = .962, F(2, 136) = 2.65, p = .074, \eta^2_p = .038$). These findings support the conclusion that dehumanization is mainly driven by the perceived suggestiveness of the target, rather than the target's gender or the participant gender.

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