Collective Transcendence Beliefs Shape the Sacredness of Objects: The Case of Art

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Many objects are viewed as sacred even though few people have a strong personal connection to them. To explain this phenomenon, we used art as a case study to develop and test a theory wherein collective transcendence beliefs—beliefs that an object links the collective to something larger and more important than the self, spanning space and time—are a key determinant of the sacredness of objects. Initial inductive studies pointed to perceptions of collective spirituality, collective meaning, and historical significance to humanity as the primary collective transcendence beliefs underlying the sacredness of art (Study 1), and subsequent exploration indicated that collective meaning was a mechanism by which collective spirituality and historical significance to humanity influenced sacredness judgments (Study 2). In support of this, six experimental studies demonstrated that heightening the collective spirituality and historical significance of an artwork resulted in participants viewing the artwork as more collectively meaningful, and subsequently more sacred (Studies 3–6), worthy of protection from the profane (Studies 3c and 6), and eliciting moral outrage in the face of desecration (Study 5). In all, across these studies (N = 5,304), we found converging evidence that collective transcendence beliefs elevate various forms of art (sculpture, music, and painting) to be held as sacred, even an amateur sketch done by the first author. Our findings uncover a novel mechanism underlying sacredness judgments, theoretically advancing our understanding of the sacred while pointing to a number of important real-world implications.

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Most objects follow a similar trajectory: The object is designed, created, and brought to market. Then the object is purchased, put to use, and eventually retired or disposed of when no longer fulfilling its intended purpose. However, some objects follow a very different trajectory: Rather than being utility oriented, these objects come to take on a greater psychological and cultural significance. People invest a great deal of time and energy into preserving and protecting these objects, revere and respect them, and demonstrate moral outrage in the face of their desecration.

These different trajectories capture the distinction between the secular or profane and the sacred (Durkheim, 1912/2008). Entities are deemed sacred when an individual or group claims them to be absolute and uncompromisable; that they cannot be exchanged for secular benefits, such as money, or even thought of in cost–benefit terms (Bartels & Medin, 2007; Graham & Haidt, 2010; McGraw et al., 2016; Ruttan & Nordgren, 2021; Tetlock et al., 2000). Sacred objects often include those that symbolize one's loyalty to the collective, such as national flags, or close relationships, such

as engagement or wedding rings (McGraw et al., 2016; Otnes & Lowrey, 1993) and family heirlooms (Belk et al., 1989; Belk & Wallendorf, 1990). When the sacred comes under threat of secular encroachment, people respond with moral outrage and a desire to punish violators (Tetlock et al., 2000). Indeed, for many just the thought of someone burning their national flag (Baron & Spranca, 1997; Graham & Haidt, 2012), or violating their wedding ring or family heirloom is unconscionable, and deserving of punishment (Daw et al., 2015; Fiske & Tetlock, 1997; McGraw & Tetlock, 2005; Tetlock, 2002).

Shaping the Sacred

While much is known about the psychological experience of sacredness—in particular, reactions to violations of the sacred—there is surprisingly little known about what leads something to become sacred. An important factor believed to determine if an individual holds an object as sacred is the extent to which that

person experiences it as *self-transcendent*—that is, for that person the object rises above mundane experience, linking the individual to something larger and more significant than the self, such as family, nation, or community. For example, Belk and colleagues' (Belk et al., 1989; Belk & Wallendorf, 1990) ethnographic research suggests that everyday objects associated with deep interpersonal meaning, such as gifts, collections, and family heirlooms, can be held as highly sacred. They become sacred, it is theorized, because they symbolize the relationship an individual has with a highly valued other (e.g., relative, life partner; Belk et al., 1989;Belk & Wallendorf, 1990). Along these lines, for many, their wedding ring is much more than a piece of metal worn on their finger. It represents a profound, even spiritual, union they have with another person, and therefore, they experience the ring as sacred. As evidence, McGraw et al. (2016) found that many people indicated that they would not sell their wedding rings for any sum of money.

Although being a critical factor in shaping the sacredness of personal objects, self-transcendence cannot fully explain why certain objects are sacred. For example, many cultural objects, that is, human creations that embody cultural meaning (Becker, 2008; Bourdieu, 1996), are considered sacred, even though many people do not find them self-transcendent. That is, the self does not have a clear, direct connection to the object that leads to a sense of being linked to something larger than the self. For instance, museum visitors have no direct relationship to the artifacts on display. Yet, many visitors still treat artifacts, such as the Magna Carta, the Rosetta Stone, or the original copy of Beowulf, as sacred (Chidester & Linenthal, 1995). Violating or destroying these significant cultural objects or putting a price on them feels categorically wrong (Bourdieu, 1996; Grampp, 1989; Velthuis, 2005). Similarly, nonreligious people often treat the spiritual and religious symbols exhibited in churches, synagogues, and temples as sacred, even though they are nonbelievers, and therefore do not personally find the objects self-transcendent (Kollareth & Russell, 2019). These cultural objects simply do not have the deep personal connection that something like a wedding ring or a family heirloom possesses. The fact that cultural objects are often held as sacred even when they hold no personal meaning and are therefore not self-transcendent to many suggests something else must underlie the sacredness of these objects. By shedding light on the psychological determinants of cultural objects' sacredness, we can uncover novel psychological mechanisms driving judgments of sacredness more broadly.

Collective Transcendence Beliefs

Here, we introduce the concept of *collective transcendence beliefs* as an important determinant of the sacredness of objects. Whereas self-transcendence is about one person's direct transcendent experience, collective transcendence involves a collective's (e.g., a given community, or all of humanity) experience. A number of cultural objects are likely experienced as collectively transcendent (e.g., the Declaration of Independence) because they link an entire group (e.g., nation) to something larger and more important, spanning space and time (e.g., national identity and pride). However, we hypothesize that when it comes to determining a cultural object's sacredness, what matters most are one's cognitive *beliefs* that an object is collectively transcendent. If an individual believes that the collective finds the object transcendent, then that individual

will deem the object sacred. They will do this not because the object has great personal meaning to them, but because they *believe* the object has great meaning to the collective.

This distinction between what one holds to be self-transcendent and what one believes to be collectively transcendent captures the distinction between first-order and second-order beliefs. First-order beliefs are one's private beliefs, while second-order beliefs are perceptions of what many others commonly believe (i.e., metaperceptions; Jachimowicz et al., 2018). Research has established that first- and second-order beliefs are unique constructs (Jachimowicz et al., 2018; Lees & Cikara, 2021; Paluck, 2009; Zou et al., 2009) and that second-order beliefs can come to shape first-order beliefs. For instance, research on intergroup conflict has found that changing perceived consensus about views of a group (e.g., African Americans) is enough to change private attitudes and values regarding the treatment of that group (Crandall et al., 2002; Monteith, 1996).

In addition, second-order beliefs have distinctive and sometimes stronger effects on one's own behaviors, independent of personal or first-order beliefs (Zou et al., 2009). Along these lines, people's second-order beliefs about how much their community cares about addressing prejudice were a stronger predictor of their own anti-prejudice behavior than how much they personally cared about addressing prejudice (Paluck, 2009). Likewise, people's second-order beliefs about their neighbors' environmentalism were a stronger predictor of their own energy-saving behavior than were their own environmentalism beliefs (Jachimowicz et al., 2018). In all, these findings highlight how powerful second-order beliefs can be and support our argument that beliefs about a cultural object being collectively transcendent can elicit sacredness judgments and behaviors.

The Case of Art

We conducted a series of studies investigating the psychological underpinnings of the sacredness of objects, using art as a case study. Art is an ideal context to examine this question for two main reasons. First, scholars across disciplines have long recognized art as something that is commonly held as sacred across the world's cultures (Bourdieu, 1996; Kant, 1987; Pfeiffer, 1982), but few have put forth any clear psychological bases for these judgments, rendering the widespread sacredness of art an important interdisciplinary puzzle, ripe for exploration. Second and most notably, in many cases self-transcendence cannot explain the sacredness of art. As described above, self-transcendence is typically thought to apply to objects that have a great deal of personal, sentimental value, such as a wedding ring or family heirloom. However, most museum attendees have no direct, personal link to the art, which would preclude the feelings of self-transcendence captured in earlier psychological research on sacred objects (Compton, 2019; Farago, 2019). Thus, examining the sacred values placed on art affords an opportunity to undercover novel mechanisms underlying sacredness judgments more generally.

Although the question of what leads art to be seen as sacred has not been investigated directly, several studies have examined the psychological factors that shape the valuation of art. A running theme of this research has been the socially constructed nature of value in this context. For example, Newman and Bloom (2012) investigated what leads original works of art to be valued more than

exact duplicates. They identified two central factors: Value that arises from the belief that an original work of art constitutes a "creative performance" (in a way that a duplicate does not), and second, value that arises from beliefs in a transfer of the artist's essence to the work through physical contact (i.e., contagion). Offering a similar account on the importance of creativity and uniqueness, Stamkou et al. (2018) further pinpointed artworks' "artistic deviance," or artists' progressive movement away from their own previous style and other artists' styles as a key factor in shaping valuations. The narratives or stories surrounding art also seem to matter. For example, Newman (2018) found that even fictional narratives surrounding objects raised the price people were willing to pay for certain objects—namely, those that resembled living things. Broadly, this literature points to a host of psychological factors, such as symbolic associations, that shape the monetary valuations of art.

While these studies point to how various social–cultural and psychological factors can shape people's evaluation of art, it is unclear whether they shape the *sacredness* of art. The key measure of artistic valuation has typically been perceived monetary value, or willingness to pay for the object (Newman, 2018; Newman & Bloom, 2012). These outcomes are inherently fungible, capturing market-based judgments of price-quality trade-offs (McGraw & Tetlock, 2005). This stands in sharp contrast to sacredness judgments; to say an entity is sacred is to declare it nonfungible—imbuing a piece of art with sacredness means claiming that it is uncompromisable and cannot be exchanged for secular (e.g., monetary) gain. Moreover, many of the factors that have been found to shape economic valuation may not hold in predicting the sacredness of art. Take, for example, perceived originality and creativity, both strong predictors of an artwork's value (e.g., Stamkou et al., 2018). We can readily think of artworks that have been ascribed originality and creativity that we may find artistically and economically valuable, such as Damien Hirst's diamond-studded human skull, which was sold for $100M in 2007 (Lovell, 2007). Yet, these works would not be considered sacred in the way the *Mona Lisa* is.

This distinction is noteworthy, especially in light of the different consequences for sacred objects versus highly valued, but nonsacred objects, with sacredness predicting willingness to protect and preserve entities (in the absence of external incentives), an unwillingness to compromise them at any cost, and aggressive responses to conflicts involving those entities (see Atran, 2010 for review). Along these lines, people may be willing to destroy artistically and economically valuable artworks for greater benefits or refuse to maintain them if costs become too great, but when it comes to sacred works, doing so becomes unthinkable and even taboo (e.g., Tetlock et al., 2000).

The Present Research

We conducted 11 studies ($N = 5,304$) testing the role collective transcendence beliefs play in shaping the sacredness of objects—in particular works of art. In a pilot study, we used an inductive methodology to explore participants' beliefs about what makes a piece of art sacred. In Study 1, we found that three different aspects of collective transcendence beliefs, namely historical significance, collective spirituality, and collective meaning, were selected as the most important factors in shaping art's sacredness. In Study 2, we examined the relationship between these key

collective transcendence beliefs and sacredness judgments, using first an aversion to trade-offs measure (Study 2a) and then a sacredness questionnaire (Studies 2b and 2c). Mediation analyses in these studies indicated that collective meaning mediates the effect of historical significance and collective spirituality on sacredness. We also replicated these findings among different populations, including workers on online platforms (Studies 2a and 2b) and undergraduate students (Study 2c). Study 3 experimentally tested whether increasing the perceived historical significance and collective spirituality of a work of art—a piece of music (Study 3a), a painting (Study 3b), and a sculpture (Study 3c)—led to increased sacredness judgments and whether perceptions of collective meaning mediated these effects. Studies 4, 5, and 6 (all preregistered) used a similar experimental paradigm, while also addressing the possible alternative explanations of uniqueness, personal meaning, and emotionality. Additionally, Study 5 explored an experiential downstream consequence—namely, whether eliciting collective transcendence beliefs about an artwork led participants to experience moral outrage when they learned about the desecration of the artwork because of secular concerns (i.e., a taboo trade-off). Finally, Study 6 tested whether increasing collective transcendence beliefs about a work of art resulted in participants donating money to protect it. Of note, the work of art examined in Study 6 was actually an amateur portrait—the first author's drawing of the second and third authors—which we used to test the robustness of our theorizing. All studies in this article were approved by the institutional review board at University of Toronto (No. 31102). All data reported in this article can be found here: https://osf.io/9mn3h/?view_only= 29b7e6eb7b8845f08442f3c2accb9a27.

The Pilot Study

We first conducted an exploratory study of people's beliefs about why they find certain pieces of art to be sacred. Given the lack of psychological research on this topic, we began with an inductive approach, given that inductive, qualitative methods are well suited to studying complex undertheorized processes (Morgan, 2007). This study was conducted to explore whether our assumptions about collective transcendence beliefs are borne out and, if so, which collective transcendence beliefs might underlie why people find certain works of art sacred.

Method

Participants

Since we did not aim to test any hypothesis in this study, there was no effect size that we targeted. We recruited 100 participants from Amazon's Mechanical Turk website (M-Turk) to participate in exchange for a modest payment, and the system provided 102 participants (see Table 1, for a summary of demographic information in all studies).[1] No participants were excluded in this study.

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[1] In some of our studies, the online platforms (M-Turk and Prolific) recorded more participants than the number we initially recruited likely because some participants finished the survey but did not submit a completion code.

Table 1
Demographic Information for All Studies

Variable	Pilot	Study 1	Study 2a	Study 2b	Study 2c	Study 3a	Study 3b	Study 3c	Study 4	Study 5	Study 6
Gender (%)											
Female	40%	42%	32%	37%	63%	36%	39%	40%	42%	51%	41%
Male	60%	57%	68%	62%	36%	61%	60%	56%	57%	48%	58%
Other	0	1%	0	1%	1%	3%	1%	4%	1%	1%	1%
Age (mean)	36.74	36.10	35.70	38.56	20.82	26.80	27.80	30.00	26.29	25.68	25.88
Ethnicity (%)											
Caucasian	66%	73%	72%	72%	25%	74%	85%	82%	85%	58%	86%
Black	22%	12%	16%	18%	1%	3%	2%	2%	1%	14%	1%
Hispanic	6%	4%	7%	7%	0%	14%	7%	8%	8%	23%	8%
Asian	6%	10%	5%	3%	61%	7%	3%	4%	3%	2%	2%
Other	1%	1%	1%	0	13%	2%	3%	4%	3%	3%	3%

Design and Procedure

Participants were first asked to indicate whether they thought there were works of art they considered to be sacred. Participants who answered "yes" were then asked to provide one or two pieces of art that they considered to be sacred by providing its title or describing it in words if they did not know the title. Participants were then asked to explain in open-ended format why they believed that piece of art was sacred.

Results

Is (Any) Art Sacred?

Seventy-six percent of the participants (77 out of 102) indicated that there are works of art that they considered sacred. Such a high percentage suggests that (at least some) art is sacred for the majority of people (Berns et al., 2012; Ruttan & Nordgren, 2021).

What Art Is Sacred?

Forty-eight participants provided one piece of art and 29 participants provided two pieces of art that they held as sacred, resulting in a total of 106 entries. Among these entries, the four most frequently mentioned works were: *Mona Lisa* (22 times), *The Last Supper* (10 times), *The Creation of Adam/Sistine Chapel* (5 times), and *Starry Night* (4 times).

What Makes the Art Sacred?

We performed a content analysis (Neuendorf, 2017; Smith, 2000) on the reasons participants provided regarding why they thought their selected work of art was sacred. The content analysis yielded 12 overarching reasons. As illustrated in Table 2, we used the underlying concept participants described as the definition of each reason. We then asked two research assistants to code all reasons provided into one of the 12 constructs. Raters obtained high agreement (Intraclass Correlation Coefficients; ICC1 = .87, ICC2 = .93) and reconciled all disagreements.

Among the categories of reasons provided, as shown in Table 2, we determined five were about the artistic features of the artwork, including its creativity, beauty, embodiment of the artist's human expression, uniqueness, and irreplaceability, which are consistent with factors that prior research identified as shaping the evaluation of art more generally (Newman & Bloom, 2012; Stamkou et al., 2018). Three reasons involved themes related to self-transcendence, including personal meaning, personal spirituality, and personal emotionality, which are consistent with findings from the existing literature on the bases of sacredness in general (Belk et al., 1989; Belk & Wallendorf, 1990; McGraw et al., 2016). Finally, the last four involved themes corresponding to our conceptualization of collective transcendence beliefs. They were beliefs that the artwork provided collective meaning, collective spirituality, collective emotionality, and historical significance to humanity. These themes pointed to participants' beliefs that the artwork had great significance for other people, linking the collective to something larger and more important, spanning space and time. For instance, by believing the art provides collective meaning, participants are indicating the work links the collective to something beyond what is physically observable in the work itself. That is, the art inspires or signals a shared understanding or experience of something profound. Similarly, believing the work has great historical significance indicates that participants believe the art serves as a record for humanity—linking the people of today with the people of the past.

Discussion

Through an inductive exploration of why participants think certain works of art are sacred, we found among other themes related to self-transcendence and artistic features, themes that fit with our conceptualization of collective transcendence beliefs emerged as factors shaping the sacredness of art. In these collective transcendence beliefs, namely collective meaning, collective spirituality, collective emotionality, and historical significance, participants explained an artwork's sacredness by ascribing transcendent elements not that they personally experience when viewing the artwork, but transcendent notions that the collective experiences from viewing the artwork. In other words, their beliefs relating to the collective's experience of transcendence helped define their own notions of the artwork's sacredness.

Study 1

The qualitative data from our pilot study provided initial support for our hypothesis that collective transcendence beliefs play a role in shaping the sacredness of art. In Study 1, we explore this possibility

Table 2

Illustrative Quotes for What Makes a Piece of Art Sacred

Constructs	Definitions	Illustrative quotes
	Artistic features	
1. Creativity	It is truly creative.	They are monumental to me in how they break ground creatively.
2. Beauty	It is truly beautiful.	Some of the most beautiful works of art created.
3. Humanity	It has the artist's devotion, dedication, and heart and soul in it.	Da Vinci was one of the greatest artists, thinkers and men in history. His genius unlocked an otherwise unfathomed world and way of thinking.
4. Uniqueness	It is truly unique.	It is sacred because it is unique and nothing else is like it.
5. Irreplaceability	It is truly irreplaceable.	It is irreplaceable. This is truly a one-of-a-kind item.
	Self-transcendence	
6. Personal emotionality	It evokes a strong emotional response in me.	Because I love it.
7. Personal meaning	It represents something beyond what is physically observable in the work itself—it has deeper meaning, to me.	Because what the symbolize to me … it is priceless … takes my breath away.
8. Personal spirituality	It provides spiritual meaning (i.e., a connection to higher powers) to me.	Because it is always in my Holy place.
	Collective transcendence	
9. Historical significance	It is a reflection of the past—a record of human history.	They were created a really long time ago and depict a time in history that is important.
10. Collective spirituality	It provides spiritual meaning (i.e., a connection to higher powers) to a lot of people.	I don't personally believe they are "holy," but I refer to them as sacred because other people think they are.
11. Collective meaning	It represents something beyond what is physically observable in the work itself—it has deeper meaning, to a vast number of people.	A great example of a piece of art that has meaning for a vast number of people.
12. Collective emotionality	It evokes a strong emotional response in many others who view it.	Makes a lot of people happy.

further, while also examining which elements of collective transcendence beliefs uncovered in the pilot might have the strongest role in determining an artwork's perceived sacredness. To do this, we asked participants to select three of the 12 constructs from the pilot study that they most strongly believe make a work of art sacred.

Method

Participants

We did not test a hypothesis in this study; we, therefore, did not target a specific effect size. To ensure we would have enough variability in responses, we recruited 250 participants from M-Turk to participate in exchange for a modest payment. Thirty-three participants were excluded because they replied to our attention check item with responses indicating they either did not read the question or were not taking the study seriously (e.g., answered "good," "yes," or "NICE" when asked to write down the name of an artwork) leaving 217 in the final analysis.

Design and Procedure

Participants first wrote down a piece of art that they held as sacred and were asked to think about what makes this piece of art sacred. Immediately after this, participants were presented with the 12 constructs from the pilot study along with a description of each to ensure participants understood (see Table 3). Participants were asked to pick the top three factors that they believed made the selected work sacred.

Results

What Art Is Sacred?

One hundred ninety-seven participants (92%) provided a specific name for the piece of art that they considered to be sacred. The rest of the participants (8%) provided a generic response, such as "abstract painting" or "molding artwork." Excluding these participants did not change the overall pattern of the results. The same four works of art as in the pilot study received the most mentions, namely the *Mona Lisa* (64 times), *The Last Supper* (24 times), *The Creation of Adam/Sistine Chapel* (23 times), and *Starry Night* (9 times).

What Makes the Art Sacred?

All participants selected their top three reasons for why the work of art they described was sacred. We therefore obtained 651 entries. Among these entries, "collective meaning" received the most mentions (see Table 3, for the number of mentions for each reason), followed by "historical significance" and "collective spirituality." Since these three reasons were each a part of the collective transcendence beliefs construct that we developed based on the pilot, this result suggests that collective transcendence beliefs are highly important in determining the sacredness of a work of art.

Discussion

In this study, we asked participants to provide a piece of art they found to be sacred, and then to indicate what reasons from a list created based on the pilot study results they believed were most central to why the artwork was sacred. We found a number of

Table 3
Number of Mentions for Each Reason

Constructs	Descriptions	No. of mentions
Collective meaning	It represents something beyond what is physically observable in the work itself—it has deeper meaning to a vast number of people.	97
Historical significance	It is a reflection of the past—a record of human history.	72
Collective spirituality	It provides spiritual meaning (i.e., a connection to higher powers) to a lot of people.	68
Irreplaceability	It is truly irreplaceable.	63
Personal meaning	It represents something beyond what is physically observable in the work itself—it has deeper meaning to me.	57
Personal spirituality	It provides spiritual meaning (i.e., a connection to higher powers) to me.	56
Collective emotionality	It evokes a strong emotional response in many others who view it.	54
Uniqueness	It is truly unique.	47
Humanity	It has the artist's devotion, dedication, and heart and soul in it.	42
Personal emotionality	It evokes a strong emotional response in me.	40
Creativity	It is truly creative.	29
Beauty	It is truly beautiful.	26

collective transcendence beliefs were very commonly referenced. In fact, the three most commonly selected reasons—collective meaning, historical significance, and collective spirituality—came from the collective transcendence beliefs construct.

All in all, this study helps to validate our theorizing that collective transcendence beliefs play an important role in determining the sacredness of a work of art. Since participants reported collective meaning, historical significance, and collective spirituality most often, in the remaining studies we narrow our focus to these three variables as the most relevant collective transcendence beliefs to explore. However, it is important to note that our focus on these three collective transcendence beliefs does not mean other factors (e.g., artistic features, self-transcendence) play no role or a weaker role in shaping the sacredness of certain objects. Rather, we focus directly on collective transcendence beliefs because they are a novel factor shaping the sacredness of objects yet to be theorized or examined in the sacredness literature.

Study 2

Our inductive approach in the pilot study and Study 1 indicated that believing a work of art has deep collective meaning, evokes collective spirituality, and serves as a record of human history, were collective transcendence beliefs that were particularly relevant in determining the sacredness of a work of art. Moving forward, we transition to using a deductive approach to explore the role these collective transcendence beliefs have in predicting sacredness. We began by assessing the relationship between collective transcendence beliefs and sacredness judgments on artworks with three correlational studies. In Studies 2a, 2b, and 2c, we presented participants with four pieces of art that participants in our previous studies identified as sacred—*The Mona Lisa, The Last Supper, The Creation of Adam*, and *Starry Night*—and asked them to rate each artwork's sacredness, collective meaning, historical significance, and collective spirituality. To increase generalizability, in Study 2a, we measured sacredness as participants' unwillingness to violate the work of art for any amount of money (Graham & Haidt, 2012), and in Studies 2b and 2c, we measured it using a questionnaire (Ruttan & Nordgren, 2021). In addition, to ensure that our findings are generalizable across different populations, in Study 2c, we

replicated findings from Study 2b, which was conducted using an online survey platform (M-Turk), with a sample of undergraduate students. Across these studies, we expected to find a positive relationship between each of the collective transcendence beliefs and participants' judgments of sacredness for each of the works of art.

Study 2a

Method

Participants. A power analysis using the "simr" package in R indicated that we needed at least 250 participants to achieve power above 80% to detect a small effect $d = 0.2$ in a hierarchical linear regression with three predictors. We recruited 300 participants from M-Turk to participate in exchange for a modest payment, six participants were excluded because they completed the study more than once, leaving 294 in the final analysis.

Design and Procedure. All participants were first presented with a photo of each of the four works of art: *Mona Lisa, The Last Supper, The Creation of Adam*, and *Starry Night* in a random order. After viewing each work, they were asked to rate it on collective meaning, historical significance, collective spirituality, and sacredness (for specific items, see below).

Measures. Unless otherwise indicated, all items in this and all subsequent studies were rated on a scale of 1 (*not at all*) to 7 (*extremely*).

Sacredness: Aversion to Trade-Offs. We used an adapted version of "The Moral Foundations Sacredness Scale" developed by Graham and Haidt (2012) to capture participants' sacredness judgments. After viewing each artwork, participants were presented with five possible violations to the artwork and asked how much money someone would have to pay them (anonymously and secretly) for them to be willing to do each violation. The five violations were as follows: (a) burn the original copy of this work of art; (b) break or cut the original copy of this work of art into pieces; (c) put dog poop on the original copy of this work of art; (d) masturbate on the original copy of this work of art; (e) make alterations to the original copy of this work of art (e.g., doodling on it). In line with Graham and Haidt (2012), participants were told "for each action, assume that nothing bad would happen to you afterward. Also, assume that you cannot use the money to make up

for your action." They were then given eight options, the first seven options had a dollar amount ranging from zero to one million dollars,[2] and the eighth option was "never for any amount of money." Selecting this eighth option indicated that participants viewed the artwork as inviolable for any amount of money, suggesting that it was sacred to them (Graham & Haidt, 2012). Consistent with past research, we summed up the number of times that participants selected the eighth option for the five violations as a continuous measure of sacredness.

Collective Transcendence Beliefs: Collective Meaning, Historical Significance, and Collective Spirituality. We created three, three-item scales to capture collective meaning, historical significance, and collective spirituality beliefs, based on participants' descriptions in the pilot study. Items measuring collective meaning were as follows: (a) "it represents something beyond the work itself—this work of art has deeper meaning to a vast number of people"; (b) "a lot of people find deep meaning in this work of art—something more than what is shown in the painting"; (c) "for many people this work of art represents something much more meaningful than the painting itself" ($\alpha = .87$). Items capturing historical significance were as follows: (a) "this work of art is a reflection of the past—a record of history"; (b) "this work of art connects us to people of the past"; (c) "this work of art is a reflection of human society from the past" ($\alpha = .88$). Items tapping into collective spirituality were as follows: (a) "for many people this work of art evokes something profoundly spiritual"; (b) "many people find this work of art spiritually moving"; (c) "it provides a sense of spirituality to a lot of people" ($\alpha = .92$).

To ensure that the three constructs were statistically distinct from each other, we first performed an exploratory factor analysis (EFA) on these items with a three-factor solution since we developed the items with three unique constructs in mind. The EFA found that each of the items fit into the construct it was designed to measure (see Online Supplementary Materials [OSM], for more information). We further performed a confirmatory factor analysis (CFA) in Study 2b with the same three-factor solution and it provided a good model fit. In addition, the three-factor model (with items for each construct loading onto separate factors) was a significantly better fit to the data than a one-factor model (with all items loading onto one single factor; see OSM, for more information).

Results

Predicting Sacredness. Because of the nested structure of the data (painting ratings within each participant), we conducted a series of linear mixed-model regressions. We grand mean centered all variables and conducted separate regression analyses to examine the extent to which each of the three collective transcendence beliefs scales predicted the total number of times participants chose "never for any amount of money" as a measure of sacredness judgment. Results showed that collective meaning ($b = .64$, $SE = .05$, $t = 11.62$, $p < .001$, $d = .68$), historical significance ($b = .28$, $SE = .05$, $t = 5.19$, $p < .001$, $d = .30$), and collective spirituality ($b = .29$, $SE = .05$, $t = 6.12$, $p < .001$, $d = .36$) all positively predicted sacredness.

We then entered all three collective transcendence beliefs factors as simultaneous predictors to test whether each factor uniquely predicted sacredness. Results indicated that collective meaning remained significant in the regression model ($b = .80$, $SE = .08$, $t = 9.68$, $p < .001$, $d = .93$), where the effect of historical significance

dropped to nonsignificance ($b = -.10$, $SE = .06$, $t = -1.59$, $p = .112$, $d = .09$) and the effect of collective spirituality dropped to marginal significance ($b = -.13$, $SE = .06$, $t = -2.03$, $p = .043$, $d = .12$). These results therefore suggest the possibility of mediation, where collective meaning mediates the effect of historical significance and collective spirituality on sacredness (see Figure 1, for a visual representation). To explore this possibility further, we conducted a multilevel mediation analysis with the MLmed macro for Statistical Package for Social Sciences (SPSS; Rockwood & Hayes, 2017). We clustered the data based on participant ID numbers, and then entered historical significance and collective spirituality separately as predictors (X), collective meaning as the mediator (M), and the aversion to trade-offs measures as outcome variables (Y). The results of the mediation analyses showed that collective meaning significantly mediated the effect of historical significance, 95% CI [.53, 1.05], and collective spirituality, 95% CI [.70, 1.45], on aversion to trade-offs.

Religious Versus Nonreligious Artwork. Because two of the four artworks (*The Last Supper* and *The Creation of Adam*) used religious themes and imagery, we tested whether the effect of collective transcendence beliefs on sacredness was not solely driven by the two religious artworks.[3] We created a dummy variable for the nonreligious and religious artworks (0 = *Mona Lisa* and *Starry Night*; 1 = *The Last Supper* and *The Creation of Adam*) and tested whether this dummy variable interacted with collective transcendence beliefs in predicting sacredness. We did not find any significant interactions between the religiosity of the artwork and historical significance ($b = .07$, $SE = .04$, $p = .070$, $d = .12$) indicating that the effects of historical significance on sacredness judgments were the same for nonreligious and religious artworks. We did, however, find a significant interaction between religiosity and collective spirituality ($b = .06$, $SE = .02$, $p = .011$, $d = .15$) suggesting that the effect of collective spirituality on sacredness differed for nonreligious and religious artworks on the sacredness measure. Importantly, however, simple slope analyses indicated collective spirituality had a significant and positive effect on sacredness for both the nonreligious ($b = .11$, $SE = .03$, $p < .001$, $d = .23$) and religious artworks ($b = .23$, $SE = .04$, $p < .001$, $d = .33$), suggesting that, even though the effect was stronger for the religious works, collective spirituality is an important driver of sacredness judgments for both types. Similarly, we also found a significant interaction between religiosity and collective meaning ($b = .07$, $SE = .02$, $p = .003$, $d = .20$), and simple slope analyses indicated collective meaning had a significant and positive effect on sacredness for both the nonreligious ($b = .23$, $SE = .04$, $p < .001$, $d = .42$) and religious artworks ($b = .36$, $SE = .04$, $p < .001$, $d = .56$). These findings suggest that collective transcendence beliefs play an important role in both religious and nonreligious artworks.

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[2] To rule out the possibility that participants selected "never for any amount of money" because the maximum dollar amount that we offered (a million dollars) is lower than each painting's market value (close to a billion dollars), we ran an additional study with the same study design as Study 2a but included an "a billion dollars" option in the aversion to trade-off measure. As reported in OSM (pp. 3–5), this additional study showed parallel results.

[3] We also tested whether participants' trait religiosity interacted with collective transcendence beliefs in predicting sacredness judgments. Overall, our findings suggest that collective transcendence beliefs play an important role in shaping sacredness regardless of the degree to which participants self-identified as religious. For more details see p. 3 in OSM.

Figure 1
Psychological Model of Collective Transcendence Beliefs Shaping Sacredness
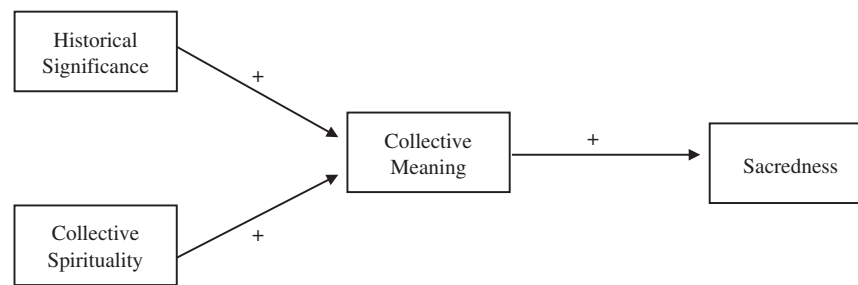
Study 2b

Method

Participants.   As in Study 2a, we recruited 300 participants from M-Turk to participate in exchange for a modest payment, two participants were excluded because they completed the study multiple times, leaving 298 in the final analysis.

Design and Procedure.   The procedure was exactly the same as Study 2a except participants completed a four-item sacredness measure (see below, for more details) instead of the aversion to trade-off measure.

Measures.

Sacredness.   We measured sacredness judgments using a scale adapted from Ruttan and Nordgren (2021). Specifically, participants rated the following four items: (a) "this piece of art is sacred"; (b) "I revere this piece of art"; (c) "this piece of art should not be compromised, no matter the benefits (money or otherwise)"; (d) "although incredibly valuable, it would be inappropriate to put a price on this piece of art" ($\alpha = .80$).

Collective Transcendence Beliefs.   We used the same scales in Study 2a to measure collective meaning ($\alpha = .88$), historical significance ($\alpha = .87$), and collective spirituality ($\alpha = .92$).

Results

Predicting Sacredness.   We used the same multiple linear mixed-model regression analyses that we used in Study 2a to test our hypotheses. Results showed that collective meaning ($b = .65$, $SE = .03$, $t = 25.87$, $p < .001$, $d = 1.11$), historical significance ($b = .53$, $SE = .03$, $t = 21.23$, $p < .001$, $d = .93$), and collective spirituality ($b = .48$, $SE = .02$, $t = 22.39$, $p < .001$, $d = 1.01$) all positively predicted sacredness.

Mediation.   Collective meaning once again mediated the effect of historical significance, 95% CI [.17, .42], and collective spirituality, 95% CI [.25, .46], on sacredness ratings.

Religious Versus Nonreligious Artwork.   We again tested whether the religiosity of the artwork interacted with collective transcendence beliefs in predicting sacredness. We did not find a significant interaction between religiosity of the artwork and historical significance ($b = -.02$, $SE = .02$; $p = .309$, $d = -.07$) nor collective meaning ($b = .04$, $SE = .04$, $p = .346$, $d = .06$) indicating that the effect of historical significance and collective meaning on sacredness ratings was the same for nonreligious and religious artworks. As in Study 2a, we found a significant interaction between religiosity and collective spirituality ($b = .06$, $SE = .04$,

$p = .001$, $d = .20$), suggesting that the effect of collective spirituality on sacredness judgments differed for nonreligious and religious artworks. However, simple slope analyses indicated that for both nonreligious ($b = .30$, $SE = .02$ $p < .001$, $d = .80$) and religious artworks ($b = .41$, $SE = .03$, $p < .001$, $d = .88$), collective spirituality had a significant and positive effect on sacredness, even though the effect was stronger for the religious works.

Study 2c

Method

Participants.   In Study 2c, we recruited 320 undergraduate students from a large North American university to participate in exchange for course credit. After using our exclusion criteria, 254 participants were included in the final analysis.[4]

Design, Procedure, and Measures.   The procedure was the same as Study 2b. We measured sacredness judgments using the same sacredness scale (Ruttan & Nordgren, 2021; $\alpha = .74$) and we used the same scales used in Studies 2a and 2b to measure collective meaning ($\alpha = .94$), historical significance ($\alpha = .88$), and collective spirituality ($\alpha = .97$).

Results

Predicting Sacredness.   We used the same multiple linear mixed-model regression analyses as Study 2b to test our hypotheses. Results showed that collective meaning ($b = .46$, $SE = .03$, $t = 16.72$, $p < .001$, $d = 1.05$), historical significance ($b = .27$, $SE = .03$, $t = 10.31$, $p < .001$, $d = .65$), and collective spirituality ($b = .34$, $SE = .02$, $t = 15.68$, $p < .001$, $d = .98$) all positively predicted sacredness.

Mediation.   As we found in Studies 2a and 2b, collective meaning once again mediated the effect of historical significance, 95% CI [.14, .33], and collective spirituality, 95% CI [.04, .35], on sacredness ratings.

Religious Versus Nonreligious Artwork.   We then tested whether the religiosity of the artwork interacted with collective

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[4] Since a large portion of the undergraduate students in the subject pool were international, having recently moved to North America, and our study required participants to fully understand statements about the artworks written in English, we decided in advance to exclude participants based on their English proficiency. Specifically, we asked participants to rate their English proficiency on a scale from 1 (*very poor*) to 5 (*very well*) and excluded participants who selected the midpoint (3) or below (2 or 1).

transcendence beliefs in predicting sacredness. We did not find a significant interaction between religiosity of the artwork and historical significance ($b = .01$, $SE = .02$, $p = .808$, $d = .02$) indicating that the effect of historical significance on sacredness ratings was the same for nonreligious and religious artworks. As in Studies 2a and 2b, we found a significant interaction between religiosity and collective spirituality ($b = .08$, $SE = .02$, $p < .001$, $d = .29$) and again simple slope analyses indicated collective spirituality had a significant and positive effect on sacredness for both the nonreligious ($b = .42$, $SE = .03$, $p < .001$, $d = .88$) and religious artworks ($b = .27$, $SE = .04$, $p < .001$, $d = .80$). Similarly, as in Study 2a, we also found a significant interaction between religiosity and collective meaning ($b = .08$, $SE = .02$, $p < .001$, $d = .24$), and simple slope analyses indicated collective meaning had a significant and positive effect on sacredness for both the nonreligious ($b = .32$, $SE = .04$, $p < .001$, $d = .73$) and religious artworks ($b = .47$, $SE = .04$, $p < .001$, $d = .83$). These findings again suggest that collective transcendence beliefs play an important role in shaping sacredness for both religious and nonreligious artworks.

Discussion

In Studies 2a, 2b, and 2c, we tested whether the three collective transcendence beliefs—collective meaning, historical significance, and collective spirituality—predicted judgments of an artwork's sacredness across different samples. In all of these correlational studies, we found that the more people believe a work of art has collective meaning, historical significance, and collective spirituality, the more they find the work to be sacred. In addition, exploratory mediation analyses in all three studies indicated that perceptions of collective meaning significantly mediated the effect of historical significance and collective spirituality beliefs on sacredness, suggesting that the reason why historical significance and collective spirituality beliefs shape sacredness judgments is because they each give rise to notions that the artwork possesses collective meaning. Such findings are in line with existing literature pointing to "meaning" as a core feature of transcendent experiences, albeit of the self (Levenson et al., 2005; Yaden et al., 2017), and as a basis for sacredness beliefs (Goyal et al., 2020). This past literature, along with the mediation results we found, therefore, suggest an important refinement to our theorizing: the influence of collective transcendence beliefs relating to historical significance and collective spirituality on sacredness ratings likely occurs via perceptions of collective meaning.

While these results are very encouraging, some limitations remain given the correlational nature of the data. First, we cannot confidently know the directionality of the effects. In other words, it is possible that sacredness judgments of these artworks led to stronger beliefs around their collective transcendence, rather than in our theorized direction. Second, these correlational data cannot demonstrate that collective transcendence beliefs causally influence artworks' perceived sacredness. To strengthen our confidence in the causal role collective transcendence beliefs play in determining the sacredness of art, we next offer experimental tests of our theory.

Study 3

In Studies 3a, 3b, and 3c, we experimentally tested the role collective transcendence beliefs play in shaping the sacredness of a

work of art. Specifically, we manipulated the historical significance and the collective spirituality of an artwork, hypothesizing that increasing these factors would result in participants viewing the work as more sacred, and, based on our findings in Studies 2a–2c, these results would be driven by beliefs that the work of art has greater collective meaning. We tested these predictions using a musical piece (3a), a painting (3b), and a sculpture (3c), to test the generalizability of our theorizing across different art forms. We also operationalized sacredness in two ways: the scale used in Studies 2b and 2c (3a–3c) and an aversion to trade-offs scale measuring participants' resistance to sacrificing the work of art to improve economic development for a community (3c).

Study 3a

Method

Participants. Since no other research has experimentally explored the influence of collective transcendence beliefs on sacredness, we did not have an exact effect size to target. So, we aimed for at least 100 participants per experimental condition ($k = 4$) to ensure we would have enough statistical power (Simmons, 2014). A sensitivity power analysis showed that this sample size would be able to detect a small-to-medium-sized effect ($d = .33$). We recruited 500 participants from the Prolific Academic website (https://www.prolific.co/) to participate in exchange for a modest payment and the system recorded 507 participants.

We excluded participants based on three predetermined criteria. First, we included an open-ended question at the end of the study asking participants to report at least one piece of information about the artwork described in this study. Two research assistants coded responses determining whether a response included at least one piece of information or not. Twenty-five participants were excluded because they failed to provide at least one piece of information that they read in the manipulation (raters obtained high agreement [ICC1 = .73, ICC2 = .84] and reconciled all disagreements through discussion). Second, we asked participants if they had existing knowledge of the artwork prior to this study. Participants who had any prior knowledge about the artwork were also excluded from analyses ($n = 19$). Finally, participants who had missing data in any of the key variables (i.e., any items in the manipulation checks and dependent variables, see the Measures section for all measures included) were also excluded ($n = 1$). After exclusions, 462 participants remained.

Design and Procedure. All participants were randomly assigned to one of four conditions, each involving participants reading a short description about an instrumental musical piece titled "The Conversation." In the historical significance condition, participants learned that this piece of music has great historical significance because it was "played on an ancient instrument" using "an ancient technique." They also read that "many people view this piece of art as a fundamental record of history—reminding us of the past and also linking us back to the human beings that lived so many thousands of years ago" (see OSM, for the exact wording of manipulations used in all studies). In the collective spirituality condition, we explained how much the music symbolized a connection to a higher spiritual power. Participants learned that the music represented a "conversation between a general and a fisherman after a defeat in war" and that the tones "symbolize the fisherman

telling the general about the Dao—the law of nature and the ultimate spiritual truth about the universe." We also included a third treatment condition where we manipulated both historical significance and collective spirituality of the artwork together to explore whether manipulating both facets might have additive effects on increasing sacredness. In this combined condition, participants were given the descriptions from both the historical significance and collective spirituality conditions.

In the control condition, participants were given information about the musical piece's artistic features without mentioning its historical significance or collective spirituality. They read that this piece of music has "great artistic features" because it is "played on a special instrument called the Gu Zheng" and is played with "a special technique." The control conditions in all of our experimental studies were designed to provide a similar amount of information about the artwork that was positive in nature and did not invoke negative reactions.

After reading their assigned description, all participants listened to the first minute of "The Conversation" (https://www.youtube.com/watch?v=tAj5hNKa3EA) and completed manipulation checks assessing beliefs about the artwork's historical significance and collective spirituality immediately after (see below). Participants then rated the musical piece on its collective meaning and sacredness. In all of our studies, the order of the sacredness and collective meaning measures was counterbalanced to make sure that the order of presentation did not influence the results. The effects of order did not change the pattern of our results in any of our studies. Participants also completed a questionnaire measuring the perceived usefulness of the art as a means for examining a possible alternative explanation that our manipulation simply rendered all aspects of the musical piece more positive in the minds of our participants.

Measures.

Manipulation Checks. We selected one item from each of the historical significance and collective spirituality scales used in previous studies to serve as our manipulation checks. These two items were as follows: "I believe for many people this piece of art evokes something profoundly spiritual" and "I believe this piece of art is a reflection of the past—a record of history."

Sacredness and Collective Meaning. We measured participants' ratings of sacredness and collective meaning of the piece of music using the same sacredness scale used in Studies 2b and 2c ($\alpha = .74$) and collective meaning scale used in Studies 2a and 2b ($\alpha = .87$).

Usefulness. We included a scale measuring perceived usefulness of the piece of music—judgments unrelated to collective transcendence beliefs and sacredness as a means for establishing discriminant validity—that is, to help ensure that our manipulations

were not simply increasing positive ratings in general (a halo effect). Usefulness was measured with three items: (a) "this piece of art is useful for everyday use"; (b) "you can use this piece of art in everyday life in a lot of different ways"; (c) "this piece of art is functional for everyday use" ($\alpha = .91$).

Results

Since we hypothesized that each of the treatment conditions would lead participants to report a higher rating on collective meaning and sacredness compared to the control, we conducted a one-way analysis of variance (ANOVA), entering condition as the between-subjects factor, followed by planned contrasts comparing the means of each treatment condition with the means of the control condition. We also conducted exploratory analyses to examine any differences between the treatment conditions, but we did not have any specific hypotheses regarding these analyses.

Manipulation Checks. We found significant omnibus effects for historical significance ratings, $F(3, 458) = 7.76$, $p < .001$, $\eta_p^2 = .05$, and collective spirituality ratings, $F(3, 458) = 11.36$, $p < .001$, $\eta_p^2 = .07$. Planned contrasts showed that when compared to those in the control condition, participants in the historical significance condition rated the musical piece as more historical, $M_{history} = 5.44$ ($SD = 1.28$); $M_{control} = 4.81$ ($SD = 1.36$); $t(458) = 3.61$, $p < .001$, $d = .49$. Additionally, participants in the collective spirituality condition rated the music as more collectively spiritual, $M_{spiritual} = 5.25$ ($SD = 1.28$), than those in the control, $M_{control} = 4.55$ ($SD = 1.80$); $t(458) = 3.79$, $p < .001$, $d = .51$. Participants in the combined condition rated the music as being both more historical, $M_{two\ combined} = 5.58$ ($SD = 1.25$); $t(458) = 4.46$, $p < .001$, $d = .60$, and more spiritual, $M_{two\ combined} = 5.33$ ($SD = 1.12$); $t(458) = 4.26$, $p < .001$, $d = .40$ than those in the control. These results indicate that our manipulations had their intended effect on participants' judgments of the musical piece's historical significance and collective spirituality.

Sacredness. We also found significant differences between conditions on rated sacredness, $F(3, 458) = 7.66$, $p < .001$, $\eta_p^2 = .05$. Specifically, when compared to the control, participants in all treatment conditions rated the artwork as significantly more sacred (see Table 4, for means, SDs, significance levels, and effect sizes).

Collective Meaning. We also found significant differences between conditions on collective meaning, $F(3, 458) = 4.16$, $p = .006$, $\eta_p^2 = .03$. Participants in each treatment condition rated the artwork as being significantly more collectively meaningful than the control condition.

Usefulness. We did not find a significant omnibus difference due to condition on the usefulness measure, $F(3, 458) = 1.29$, $p = .278$,

Table 4

Study 3a Means, SDs, and Planned Contrasts Results

Variable	Control $n = 116$	Historical significance condition $n = 114$				Collective spirituality condition $n = 115$				Two combined condition $n = 117$			
	M (SD)	M (SD)	t $(df = 458)$	p	d	M (SD)	t $(df = 458)$	p	d	M (SD)	t $(df = 458)$	p	d
Sacredness	4.12 (1.06)	4.57 (1.21)	3.08	.002	.41	4.47 (1.04)	2.38	.018	.31	4.81 (1.11)	4.71	<.001	.62
Collective meaning	4.93 (1.31)	5.42 (1.06)	3.34	<.001	.44	5.31 (1.09)	2.57	.010	.34	5.28 (1.00)	2.37	.018	.31
Usefulness	3.26 (1.53)	3.37 (1.53)	0.59	.558	.07	3.48 (1.43)	1.10	.271	.04	3.63 (1.49)	1.89	.059	.25

$\eta_p^2 = .01$. Participants in each of the treatment conditions rated the music as useful as those in the control. This null finding suggests that our manipulations did not simply make all aspects of the art more positive in the eyes of participants.

Mediation. We tested whether collective meaning mediated the effect of condition on sacredness using the bootstrapping procedure for assessing indirect effects within the PROCESS package for SPSS (Model 4) with 10,000 resamples (Hayes, 2012). We first entered condition (all four) as the predictor (X), sacredness as the outcome variable (Y), and collective meaning as the mediator (M). Results showed that the indirect effect of collective meaning was significant—the 95% CI did not include zero [.01, .10]. We then conducted three separate mediation analyses to see if collective meaning mediated the effect of each treatment condition (compared to the control) on sacredness. Results indicated a significant mediation for historical significance condition, 95% CI [.04, .19], collective spirituality condition, 95% CI [.02, .28], and the combined condition, 95% CI [.01, .10].

Additive Effects. Although we did not have specific hypotheses regarding differences within the three treatment conditions, there might be an additive effect on sacredness when combining historical significance and collective spirituality because each of them taps into independent facets of collective transcendence beliefs. However, there might not be additive effects because only one collective transcendence belief needs to be elicited to establish sacredness beliefs, and a combination of different collective transcendence beliefs has a redundant impact on sacredness judgments. We conducted exploratory analyses to examine whether any additive effects might have occurred. We did not find significant differences in sacredness ratings between the combined condition and the historical significance condition, $t(458) = 1.61$, $p = .108$, $d = .15$. However, there was a significant difference between the combined condition and the spiritual condition, $t(458) = 2.32$, $p = .021$, $d = .22$, indicating that making salient both historical significance and collective spirituality together had an additive effect in shaping sacredness judgments.[5]

Study 3b

Method

Participants. We recruited the same number of participants as in Study 3a ($N = 500$) and the system recorded 511 participants. We used the same system for excluding participants as in Study 3a. Twenty-nine participants were excluded because raters determined that they failed to provide at least one piece of accurate information that they read about the artwork (raters obtained high agreement [ICC1 = .85, ICC2 = .92] and reconciled all disagreements through discussion). Another 37 participants were excluded because they indicated that they knew about the painting prior to participating in the study, and two participants were excluded because of missing data, leaving 443 participants in the final analysis.

Design and Procedure. The procedure was the same as Study 3a except the information participants read described a painting that depicted many handprints on a wall (https://en.wikipedia.org/wiki/Cueva_de_las_Manos). In the historical significance condition, we made salient how the painting is a record of human history. Participants read that the painting was "discovered in a cave" and that it was "found to be 13,000 years old." They also read

that the painting "serves as a record of human history, showing us where we came from and linking us back to the human beings that lived so many thousands of years ago." In the collective spirituality condition, we made salient how the artwork symbolized a connection to a higher power that unites humanity. Participants read that the painting has strong spiritual meaning in that the handprints are believed to represent a "ceremony for acceptance into important social groups" symbolizing "the power of collective human unity." In addition, we included a combined condition that presented both the historical significance and the collective spirituality descriptions. In the control condition, participants were given positive information about the work's artistic features. They read that this painting was painted "using different shading techniques," that the painting has "strong contrasts in colors and shades," and that the images "help to create the best contrast between shapes." After reading their assigned information, participants completed the manipulation checks, measures of collective meaning ($\alpha = .87$), sacredness ($\alpha = .78$), and usefulness ($\alpha = .91$) used in Study 3a.

Results

We again conducted a one-way ANOVA, entering condition as the between-subjects factor, followed by planned contrasts comparing the means of each treatment with the control.

Manipulation Checks. We found significant differences between conditions on historical significance, $F(3, 439) = 30.44$, $p < .001$, $\eta_p^2 = .17$, and collective spirituality, $F(3, 439) = 3.81$, $p = .010$, $\eta_p^2 = .03$. Specifically, compared to the control condition, planned contrasts showed that participants in the historical significance condition rated the painting as more historical, $M_{history} = 6.30$ ($SD = .88$), $M_{control} = 5.03$ ($SD = 1.42$); $t(439) = 7.80$, $p < .001$, $d = 1.05$, and those in the collective spirituality condition rated the painting as more collectively spiritual, $M_{spiritual} = 5.20$ ($SD = 1.28$), $M_{control} = 4.84$ ($SD = 1.29$); $t(439) = 2.09$, $p = .037$, $d = .28$. Additionally, participants in the combined condition rated the painting as both more historical, $M_{two\ combined} = 6.25$ ($SD = .88$); $t(439) = 7.46$, $p < .001$, $d = 1.01$ and more spiritual, $M_{two\ combined} = 5.39$ ($SD = 1.24$); $t(439) = 3.19$, $p = .002$, $d = .43$ than the control, indicating that our manipulations influenced participants' perceptions of the artwork as intended.

Sacredness. We found significant differences between the conditions in predicting sacredness, $F(3, 439) = 49.05$, $p < .001$, $\eta_p^2 = .25$. Specifically, when compared to the control, participants in each of the treatment conditions rated the painting as more sacred (see Table 5, for means, SDs, significance level, and effect sizes).

Collective Meaning. We also found significant differences between the conditions in predicting collective meaning, $F(3, 439) = 7.15$, $p < .001$, $\eta_p^2 = .05$, such that participants in each of the treatment conditions rated the painting as more collectively meaningful than the control.

Usefulness. We did not find a significant omnibus difference between conditions on usefulness, $F(3, 439) = 2.08$, $p = .103$, $\eta_p^2 = .01$.

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[5] We also conducted 2 × 2 factorial ANOVAs for all of our experimental studies, and results largely replicated the effects we found when examining our research questions using a one-way ANOVA. For more details see pp.15–16 in OSM.

Table 5
Study 3b Means, SDs, and Planned Contrasts Results

Variable	Control $n = 113$ M (SD)	Historical significance condition $n = 110$				Collective spirituality condition $n = 112$				Two combined condition $n = 108$			
		M (SD)	t (df = 439)	p	d	M (SD)	t (df = 439)	p	d	M (SD)	t (df = 439)	p	d
Sacredness	3.73 (1.23)	5.04 (.97)	8.89	<.001	1.20	4.16 (1.15)	2.92	.004	.39	5.28 (1.02)	10.51	<.001	1.42
Collective meaning	5.16 (1.15)	5.60 (1.03)	3.28	.001	.44	5.58 (.95)	3.15	.002	.42	5.75 (.84)	4.38	<.001	.59
Usefulness	2.60 (1.26)	2.66 (1.27)	0.33	.740	.04	3.03 (1.50)	2.31	.021	.31	2.75 (1.51)	0.81	.419	.11

Mediation. We tested whether collective meaning meditates the effect of condition on sacredness using the same procedure as in Study 3a. The results showed that the indirect effect of collective meaning was significant: the 95% CI did not include zero [.04, .13]. We conducted three separate mediation analyses to see if collective meaning mediated the effect of each condition (compared to the control) on sacredness. Results indicated a significant mediation for historical significance condition, 95% $CI_{indirect}$ [.03, .17], collective spirituality condition, 95% $CI_{indirect}$ [.07, .36], and the combined condition, 95% $CI_{indirect}$ [.04, .15].

Additive Effects. We conducted exploratory analyses to examine whether there were any additive effects of making salient both the historical significance and the collective spirituality of the work of art. Similar to what we obtained in Study 3a, we did not find a significant difference in sacredness ratings for participants in the combined condition and the historical significance condition, $t(439) = 1.65$, $p = .099$, $d = .16$, but we did find a significant difference between the combined condition and the collective spirituality condition, $t(439) = .60$, $p < .001$, $d = .73$, such that participants in the combined condition rated the painting as significantly more sacred than participants in the collective spirituality condition. These findings again suggest that making salient both an artwork's historical significance and its collective spirituality together might have an additive effect on sacredness judgments.

Study 3c

Method

Participants. We again recruited 500 participants from Prolific to participate and the system recorded data from 512 participants. We used the same exclusion procedures as 3a and 3b. Thirty-eight participants were excluded because they failed to provide at least one accurate piece of information that they had read (raters obtained high agreement [ICC1 = .80, ICC2 = .89]). Another six participants were excluded because they indicated that they knew of the artwork prior to participating in the study, and one participant was excluded because of missing data, leaving 467 participants in the final analysis.

Design and Procedure. The procedure was the same as for Studies 3a and 3b except that the information we manipulated focused on a public work of art located in Brooklyn Bridge Park in New York City entitled "Bridge Over Tree" (https://www.publicartfund.org/exhibitions/view/siah-armajani-bridge-over-tree/) and we included an aversion to trade-offs measure to capture sacredness judgments in addition to the sacredness scale (see below, for details). In the historical significance condition, we described how the artwork represented an important historical event. Specifically,

participants learned that this work of art has great historical significance as it was created "in memory of all the Americans who died during the Vietnam War" and it reminds us of "what past generations went through when they went to a distant land and gave their lives," In the collective spirituality condition, participants read that the art has strong spiritual meaning as it "causes those walking on the bridge to swerve around the tree and have unexpected encounters with strangers. It is a poetic way of connecting different people, places, communities, and ideas." In addition, as in Studies 3a and 3b, we included a combined condition where we presented both descriptions. In the control condition, participants learned that this piece of public art has "great form and landscaping" and that it has "strong contrasts in its forms" as the "sense of familiarity is challenged by its form, which rises and falls at a sharp angle in the center."

Participants were then asked to rate the artwork on its collective spirituality and historical significance as manipulation checks, as well as collective meaning (α = .88), sacredness (α = .76), and usefulness (α = .89) using the same scales as those used in Studies 3a and 3b. Participants also completed a measure of their aversion to destroying this work of art in order to use the land to build housing (a mundane alternate use; see Baron & Spranca, 1997). At the end of the survey, participants were told

> Recently, a city councilperson in New York City has proposed deconstructing "Bridge Over Tree" in order to make room for more condominiums in the area. This would involve the destruction of the art, but would offer more living space for local people.

Participants were then asked, "which of the following best described how you think of this proposal?" and were given four choices: (a) "I think this is a good thing"; (b) "I do not object to this proposal"; (c) "I think this should be done if it brings more benefits"; (d) "NO matter how many more benefits, this should NOT be done." Responses on this scale were recoded so that the fourth choice was coded as "1" and all other choices were coded as "0." It was coded this way because only the fourth option captures an aversion to making a trade-off that would compromise the artwork, while the other three options indicate a willingness to make such a trade-off (Ruttan & Nordgren, 2021).

Results

We again conducted a one-way ANOVA, entering condition as the between-subjects factor, followed by planned contrasts comparing the means of each treatment with the control.

Manipulation Checks. We found significant differences between conditions on rated historical significance, $F(3, 463) = 17.54$, $p < .001$, $\eta_p^2 = .10$, and collective spirituality, $F(3, 463) = 10.59$,

$p < .001$, $\eta_p^2 = .06$. Specifically, when compared to the control, planned contrasts showed that participants in the historical significance condition rated the art as more historical, $M_{history} = 5.26$ ($SD = 1.44$), $M_{control} = 4.18$ ($SD = 1.63$); $t(463) = 5.44$, $p < .001$, $d = .73$ and participants in the collective spirituality condition rated the work as more collectively spiritual, $M_{spiritual} = 4.60$ ($SD = 1.60$), $M_{control} = 3.85$ ($SD = 1.55$); $t(463) = 3.70$, $p < .001$, $d = .50$. Those in the combined condition rated the artwork as being both more historically significant, $M_{two\ combined} = 5.19$ ($SD = 1.52$); $t(463) = 5.10$, $p < .001$, $d = .69$, and more collectively spiritual, $M_{two\ combined} = 4.84$ ($SD = 1.52$), $t(463) = 4.92$, $p < .001$, $d = .67$, than the control. These results indicate that our manipulations were successful.

Sacredness. We found significant differences between conditions on the sacredness scale, $F(3, 463) = 10.54$, $p < .001$, $\eta_p^2 = .06$. When compared to the control, participants in each of the treatment conditions rated the artwork as being significantly more sacred (see Table 6, for means, SDs, significance level, and effect sizes). We then conducted a number of logistic regression analyses using condition (all conditions, and then each treatment condition vs. control condition) predicting participants' likelihood of choosing the option indicating that the demolition of art for commercial use should never be done. Results showed an overall effect of condition ($B = .31$, $SE = .09$, $p < .001$, Nagelkerke $R^2 = .04$). Specifically, when compared to the control (24.8%), participants in the historical significance condition (42.9%; $B = .41$, $SE = .15$, $p = .004$, Nagelkerke $R^2 = .05$) and participants in the combined condition (45.5%; $B = .31$, $SE = .10$, $p = .001$, Nagelkerke $R^2 = .06$) were significantly more likely to resist the demolition of the art no matter the benefits. The difference between the control and the collective spirituality condition was not significant (33.1%; $B = .41$, $SE = .30$, $p = .171$, Nagelkerke $R^2 = .01$), though it was in the hypothesized direction.

Collective Meaning. We also found significant differences between conditions on collective meaning, $F(3, 463) = 8.02$, $p < .001$, $\eta_p^2 = .05$, where each treatment condition rated the artwork as more collectively meaningful than the control.

Usefulness. We found a significant omnibus effect of condition on ratings of usefulness, $F(3, 463) = 3.31$, $p = .020$, $\eta_p^2 = .02$; however, planned contrasts yielded no significant between-condition comparisons.

Mediation. We tested whether collective meaning mediated the effect of condition on participants' sacredness ratings as well as their refusal to allow the work of art to be destroyed in order to make way for housing to be built. We conducted these mediation analyses in line with the procedure described in Studies 3a and 3b. Results showed that the indirect effect of collective meaning was significant for both outcome measures. We then conducted the mediation analyses again, this time separately entering each treatment condition versus the control as the predictor. The indirect effect of collective meaning was significant in all cases (see Table 7).

Additive Effects. Similar to Studies 3a and 3b, we did not find evidence of an additive effect between the combined condition and the historical significance condition. There was no significant difference for sacredness judgments $t(463) = .78$, $p = .434$, $d = .07$ or for the trade-offs measure $B = -.11$, $SE = .26$, $p = .685$, Nagelkerke $R^2 = .01$. However, we did find a significant difference for sacredness judgments, $t(463) = 3.03$ $p = .003$, $d = .28$, and the trade-off measure, $B = -.262$, $SE = .13$, $p = .050$, Nagelkerke

$R^2 = .22$, between the combined and the collective spirituality conditions. This parallels what we found in Studies 3a and 3b, and once again suggests that increasing a work of art's historical significance and its collective spirituality together might have an additive effect on judgments of its sacredness.

Discussion

Studies 3a–3c provided experimental evidence supporting our hypotheses regarding collective transcendence beliefs shaping the sacredness of art—results that held across three different art forms. We also found that collective meaning perceptions mediated these effects, pointing to collective meaning as a mechanism underlying these effects.

Study 4

Study 4 was a preregistered[6] study designed to address alternative mechanisms that might explain the effects we observed in Studies 3a–3c. In particular, by manipulating historical significance and collective spirituality we might have also inadvertently manipulated how *positive or negative* participants felt toward the artwork. Similarly, by manipulating how historic the artwork was, we may have inadvertently affected perceptions of how *unique* the artwork was, since old things are typically rare, and there may be an inherent link between scarcity and sacredness (Belk et al., 1989). It is also possible our manipulations convinced participants that the artwork had relevance and importance to them personally, making the artwork *personally meaningful* rather than collectively meaningful. Thus, to help ensure that collective transcendence beliefs, and not these alternative mechanisms, are driving our effects, in Study 4 we employed a more stringent control condition that portrayed the art in a very positive light and emphasized the uniqueness of the art without highlighting its historical significance or its importance to collective spirituality. Moreover, to further help rule these alternative explanations out, we also included items assessing how positively and negatively participants felt after reading the description of the art, how unique they viewed the art to be, and how personally meaningful they found the work to be, all of which we decided a priori to control for if participants in the treatment conditions scored higher on these measures than participants in the control condition (see preregistered analysis plan).

Method

Participants

As described in our preregistration, because of how stringent our control condition was, we recruited participants based on the smallest effect size that we obtained in our previous studies ($d = .28$). A G*Power analysis indicated that we needed 202 participants per condition (total $N = 808$) to achieve .80 power. In addition to the exclusion criteria, we used in previous studies, to ensure that our participants paid close attention to our manipulations, we also asked participants after reading about the artwork to provide the name of the artwork they had just read about (see below, for more details). Recognizing that this might lead to a larger number of exclusions,

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[6] https://osf.io/9dsf4/?view_only=db4a696d677a4e4c9fe2a476f3d38ff5.

Table 6
Study 3c Means, SDs, and Planned Contrasts Results

Variable	Control $n = 109$ M (SD)	Historical significance condition $n = 119$				Collective spirituality condition $n = 118$				Two combined condition $n = 121$			
		M (SD)	t (df = 463)	p	d	M (SD)	t (df = 463)	p	d	M (SD)	t (df = 463)	p	d
Sacredness	3.56 (1.01)	4.20 (1.16)	4.31	<.001	.57	3.87 (1.14)	2.11	.035	.28	4.31 (1.17)	5.10	<.001	.68
Collective meaning	4.73 (1.17)	5.31 (1.20)	3.80	<.001	.50	5.14 (1.14)	2.65	.008	.35	5.44 (1.08)	4.62	<.001	.61
Usefulness	3.43 (1.50)	3.21 (1.42)	−1.12	.262	.17	3.75 (1.54)	1.62	.106	−.15	3.69 (1.48)	1.30	.195	.20

we recruited 900 participants from Prolific to participate in exchange for a modest payment, and the system recorded 936 participants. Ninety-nine participants were excluded because they failed to provide either the name of the artwork and/or one accurate piece of information (raters obtained high agreement [ICC1 = .87, ICC2 = .93]). Another 18 participants were excluded because they knew of the art prior to participating in the study, and three were excluded because of missing key variables, leaving 816 participants in the final analysis.

Design and Procedure

The procedure of this study was the same as Studies 3a–3c except that the information provided to the participants was about a painting called "The Lotus." It was painted by a famous Chinese artist, Wu Bing, in the Song Dynasty (https://www.dpm.org.cn/collection/paint/229940.html). In the historical significance condition, we described how historically significant the painting was. Participants learned that "the painting was determined to be over 900 years old, meaning it has survived countless events in human history." They also read that "it truly serves as a record of human history, reminding us of our past and linking us back to the human beings that lived so many hundreds of years ago." In the collective spirituality condition, participants read that the painting has strong spiritual meaning to millions in that "The lotus flower is central to Buddhism … everywhere the baby Buddha stepped, a lotus flower miraculously bloomed" and that "this painting—The Lotus—aims to capture these important spiritual aspects of Buddhism." Additionally, we included a combined condition that presented both the historical significance and the collective spirituality descriptions. In the control condition, participants were given information highlighting the artwork's uniqueness described in a positive tone, without mentioning its historical significance or importance for collective spirituality. Participants read that this painting is "considered a work of art because of its uniqueness" and "it was recently painted by an outstanding young artist … a prodigy whose work is very unique."

All participants were then asked to rate the artwork on its historical significance, collective spirituality, collective meaning

($\alpha = .89$), sacredness ($\alpha = .72$), and usefulness ($\alpha = .92$) as in earlier studies. In addition, participants rated the artwork on its uniqueness ("I believe, this piece of art is unique"), the extent to which they felt positive ("This piece of art makes me feel positive") and negative emotions ("This piece of art makes me feel negative") in response to the work of art, and how much personal meaning they found in the piece of art ("I personally find deep meaning in this piece of art that is related to my own life").

Results

Eight participants identified as Buddhists, which might influence our results since our stimulus had Buddhist meaning. We, therefore, also conducted all data analyses excluding these participants. The overall pattern of results remained the same as the results reported below. All analyses presented were in line with our preregistered analysis plan. We conducted a one-way ANOVA, entering condition as the between-subjects factor, followed by planned contrasts comparing the means between each treatment condition and the control condition on all measured variables.

Manipulation Checks

We found significant differences between conditions on rated historical significance, $F(3, 812) = 101.99$, $p < .001$, $\eta_p^2 = .27$, and collective spirituality, $F(3, 812) = 38.78$, $p < .001$, $\eta_p^2 = .13$. When compared to the control, planned contrasts showed that participants in the historical significance condition rated the artwork as more historical, $M_{\text{history}} = 5.70$ ($SD = 1.31$), $M_{\text{control}} = 3.64$ ($SD = 1.69$); $t(812) = 14.63$, $p < .001$, $d = 1.46$, and participants in the collective spirituality condition rated it as being more collectively spiritual, $M_{\text{spiritual}} = 5.73$ ($SD = 1.17$), $M_{\text{control}} = 4.55$ ($SD = 1.53$); $t(812) = 9.18$, $p < .001$, $d = .91$. Participants in the combined condition rated the work as both more historically significant, $M_{\text{two combined}} = 5.77$ ($SD = 1.17$); $t(812) = 15.56$, $p < .001$, $d = 1.54$, and more collectively spiritual, $M_{\text{two combined}} = 5.75$ ($SD = 1.15$), $t(812) = 9.53$, $p < .001$, $d = .95$, than the control. These results, therefore, suggest our manipulations were successful.

Table 7
Study 3c Mediation Analyses Results With Collective Meaning as Mediator (M)

Outcome variable (Y)	Predictor (X)			
	All conditions	History versus control	Spiritual versus control	Combined versus control
Sacredness ratings	[.07, .16]	[.06, .21]	[.04, .34]	[.08, .19]
Aversion to trade-offs	[.07, .21]	[.07, .36]	[.04, .38]	[.10, .37]

Sacredness

We found significant differences between conditions on sacredness judgments, $F(3, 812) = 50.26$, $p < .001$, $\eta_p^2 = .16$, Specifically, when compared to the control, participants in each treatment condition rated the artwork as significantly more sacred (see Table 8, for means, SDs, significance levels, and effect sizes).

Collective Meaning

We also found significant differences between conditions on collective meaning, $F(3, 812) = 55.48$, $p < .001$, $\eta_p^2 = .17$, where each treatment condition rated the artwork as significantly more collectively meaningful than the control.

Alternative Mechanisms

We did not find significant omnibus differences between conditions on rated positivity, $F(3, 812) = 1.91$, $p = .126$, $\eta_p^2 = .01$, negativity, $F(3, 812) = 2.57$, $p = .054$, $\eta_p^2 = .01$, nor personal meaning $F(3, 812) = 1.65$, $p = .177$, $\eta_p^2 = .01$, suggesting that, overall, our treatments did not differentially affect how positive or negative participants felt when viewing the piece of art nor how personally meaningful participants viewed the artwork to be. These null results help rule out differences in positivity, negativity, and personal meaning, as alternative explanations for the effects we found. We did, however, find differences across conditions on perceived uniqueness, $F(3, 812) = 12.62$, $p < .001$, $\eta_p^2 = .04$, and usefulness, $F(3, 812) = 5.78$, $p = .001$, $\eta_p^2 = .02$. Pairwise comparisons found that each of the treatment conditions was rated as more unique than the control condition, and that the historical significance condition was rated as less useful than the control. To address these unexpected differences across conditions, in line with our preregistration, we include them as alternative explanations in our mediation analyses (see below). Furthermore, as an additional check, we also reran the ANOVAs examining the effect of the treatment conditions on collective meaning and sacredness while controlling for uniqueness and usefulness. Results of these analyses, which yielded significant results parallel to those reported here, are described in the OSM.

Mediation

We tested whether collective meaning mediated the effect of condition on sacredness judgments using the same procedure as previous studies. We entered condition as the predictor, sacredness ratings as the outcome variable, and collective meaning as the mediator. In line with our preregistered analysis plan, we also entered the measures of uniqueness and usefulness as additional mediators to examine if these alternative mechanisms might explain the effect of the treatment conditions on sacredness instead of collective meaning. Results showed that the indirect effect of collective meaning was significant for every mediation analysis (see Table 9, for 95% CIs), indicating that collective meaning was a consistent mechanism underlying the effect of the treatment conditions on sacredness, above and beyond any influence of uniqueness and usefulness perceptions.

Discussion

Study 4 provided additional experimental evidence that collective transcendence beliefs help shape the sacredness of art. Historical significance and collective spirituality were both important factors in sacredness judgments and their influence was mediated by judgments of collective meaning. Study 4's design also helped rule out a number of alternative explanations, including the uniqueness of the artwork, positivity and negativity felt toward the art, and the personal meaning of the work.[7]

Study 5

In Study 5, another preregistered study,[8] we used the same experimental procedures and stimuli as Study 4 but with one important extension—we examined whether participants holding an artwork as more collectively transcendent and consequentially more sacred would experience more moral outrage if led to believe that the artwork had been desecrated (i.e., a key experiential marker of encountering the sacred; Tetlock et al., 2000). We expected that participants in the collective transcendence conditions would demonstrate higher levels of moral outrage when they learned the artwork had been violated in exchange for secular considerations, compared to those in the control condition.

Method

Participants

As described in our preregistration, we recruited 1,050 participants from Prolific to participate and the system recorded 1,082 participants. Sixty-seven participants were excluded because they did not provide either the name of the artwork and/or one accurate piece of information about the artwork (raters obtained high agreement [ICC1 = .81, ICC2 = .89]). In addition, 11 participants were excluded because they said that they knew of the art prior to participating in the study, and 10 were excluded because of missing key variables, leaving 994 participants in the final analysis.

Design and Procedure

The procedure of this study was the same as Study 4 except that after rating the artwork on its historical significance, collective spirituality, collective meaning ($\alpha = .89$), sacredness ($\alpha = .76$), usefulness ($\alpha = .93$), positivity, negativity, and personal meaning, participants also completed a measure of moral outrage. In this moral outrage measure, participants were told "a water main break at the museum that houses *The Lotus* has resulted in it being damaged and in need of restoration." They were also told that "the incident also caused some serious damage to the museum floor and the

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[7] We ran an additional study using the same procedures as Study 4, but also included measures of "authenticity" and "fluency" to examine each as a possible alternative mechanism. We did not find an omnibus effect of experimental condition for neither authenticity $F(3, 436) = 1.66$, $p = .174$, $\eta_p^2 = .01$, nor fluency $F(3, 436) = 1.07$, $p = .364$, $\eta_p^2 = .01$, and exploratory mediation analyses entering authenticity and fluency along with collective meaning found only collective meaning yielded a significant indirect effect. Together, these results help rule out authenticity or fluency as alternative mechanisms of the effects we found. See OSM (pp. 10–13) for details.

[8] https://osf.io/s3hc9/?view_only=fe0bd9e601e8458aad583e4a0d83f906.

Table 8
Study 4 Means, SDs, and Planned Contrasts Results

Variable	Control $n = 204$ M (SD)	Historical significance condition $n = 193$				Collective spirituality condition $n = 201$				Two combined condition $n = 218$			
	M (SD)	M (SD)	t (df = 812)	p	d	M (SD)	t (df = 812)	p	d	M (SD)	t (df = 812)	p	d
Sacredness	3.49 (1.13)	4.55 (1.08)	9.59	<.001	.96	4.13 (1.18)	5.85	<.001	.59	4.71 (1.03)	11.33	<.001	1.13
Collective meaning	4.50 (1.31)	5.22 (1.08)	6.38	<.001	.64	5.78 (1.06)	11.6	<.001	1.16	5.66 (.98)	10.65	<.001	1.06
Usefulness	3.09 (1.56)	2.67 (1.32)	−2.86	.004	−.29	3.27 (1.55)	1.24	.216	.12	3.03 (1.45)	−.45	.656	−.05
Uniqueness	4.66 (1.69)	5.50 (1.49)	5.52	<.001	.55	4.97 (1.44)	2.05	.041	.21	5.34 (1.44)	4.65	<.001	.47
Personal meaning	3.21 (1.57)	3.22 (1.54)	.08	.940	.01	3.39 (1.66)	1.18	.238	.12	3.49 (1.44)	1.88	.060	.19
Positivity	4.99 (1.27)	5.18 (1.22)	1.59	.113	.16	5.14 (1.27)	1.26	.208	.13	5.27 (1.16)	2.35	.019	.24
Negativity	2.28 (1.21)	2.22 (1.06)	−.58	.561	−.06	2.00 (1.17)	−2.50	.013	−.25	2.08 (1.13)	−1.81	.070	.18

museum couldn't reopen unless the floor got repaired." Furthermore, we told participants that "the management team at the museum decided to use all of its budget to repair the floor instead of restoring The Lotus, so the museum could reopen as soon as possible. This decision has caused even greater damage to The Lotus—it is now broken into pieces and the colors have all faded away. Most art connoisseurs think the painting can't be restored anymore in its current condition." Participants then indicated the extent to which they felt *angry, disgusted*, and *upset* by what the museum had done (Tetlock et al., 2000; α = .92), and a composite of these three items was used as a measure of moral outrage.

Results

We conducted all analyses following our preregistered analysis plan. We conducted a one-way ANOVA, entering condition as the between-subjects factor, followed by planned contrasts comparing each treatment condition to the control condition on all measured variables.

Manipulation Checks

We found significant differences between conditions on rated historical significance, $F(3, 990) = 93.17$, $p < .001$, $\eta_p^2 = .22$, and collective spirituality, $F(3, 990) = 50.43$, $p < .001$, $\eta_p^2 = .13$. When compared to the control, planned contrasts showed that participants in the historical significance condition rated the artwork as more historical, $M_{history} = 5.81$ (SD = 1.21), $M_{control} = 3.91$ (SD = 1.86); $t(990) = 14.40$, $p < .001$, $d = .92$, and participants in the collective spirituality condition rated it as being more collectively spiritual, $M_{spiritual} = 5.85$ (SD = 1.25), $M_{control} = 4.63$ (SD = 1.42); $t(990) = 10.62$, $p < .001$, $d = .68$. Participants in the combined condition rated the work as both more historically significant, $M_{two\ combined} = 5.83$ (SD = 1.18); $t(990) = 14.60$, $p < .001$, $d = .93$, and more

collectively spiritual, $M_{two\ combined} = 5.84$ (SD = 1.12), $t(990) = 10.50$, $p < .001$, $d = .67$, than the control. These results therefore suggest our manipulations were successful.

Sacredness

We found significant differences between conditions on sacredness judgments, $F(3, 990) = 60.87$, $p < .001$, $\eta_p^2 = .16$, When compared to the control, participants in each treatment condition rated the artwork as significantly more sacred (see Table 10, for means, SDs, significance level, and effect sizes).

Collective Meaning

We also found significant differences between conditions on collective meaning, $F(3, 990) = 65.62$, $p < .001$, $\eta_p^2 = .17$, where each treatment condition rated the artwork as significantly more collectively meaningful than the control.

Moral Outrage

There were also significant differences between conditions on experienced moral outrage, $F(3, 990) = 11.83$, $p < .001$, $\eta_p^2 = .03$. When compared to the control, participants in each treatment condition experienced higher levels of moral outrage.

Mediation

We first tested whether collective meaning mediated the effect of condition on sacredness judgments using the same procedure as the previous experimental studies. We entered condition as the predictor, sacredness ratings as the outcome variable, and collective meaning as the mediator. We also entered the two significant alternative mechanisms, uniqueness and usefulness, as additional

Table 9
Study 4 Mediation Analyses Results With Sacredness as the Outcome Variable (Y)

Mediators (M)	Predictor (X)			
	All conditions	History versus control	Spiritual versus control	Two combined versus control
Collective meaning	[.05, .11]	[.06, .16]	[.26, .54]	[.06, .15]
Uniqueness	[.03, .07]	[.02, .10]	[.01, .13]	[.02, .06]
Usefulness	[−.02, .00]	[−.06, −.01]	[−.02, .09]	[−.02, .01]

Table 10
Study 5 Means, SDs, and Planned Contrasts Results

Variable	Control $n = 244$ M (SD)	Historical significance condition $n = 247$				Collective spirituality condition $n = 252$				Two combined condition $n = 251$			
		M (SD)	t (df = 990)	p	d	M (SD)	t (df = 990)	p	d	M (SDs)	t (df = 990)	p	d
Sacredness	3.41 (1.16)	4.64 (1.13)	11.49	<.001	.73	4.19 (1.21)	7.31	<.001	.46	4.68 (1.22)	11.91	<.001	.76
Collective meaning	4.64 (1.33)	5.26 (1.06)	6.18	<.001	.39	5.80 (1.09)	11.58	<.001	.74	5.88 (.93)	12.41	<.001	.79
Moral outrage	3.86 (1.62)	4.35 (1.55)	3.53	<.001	.22	4.45 (1.40)	4.28	<.001	.27	4.66 (1.56)	5.74	<.001	.36
Usefulness	3.11 (1.56)	2.77 (1.42)	−2.51	.012	−.16	3.42 (1.53)	2.29	.023	.15	3.21 (1.51)	.72	.471	.05
Uniqueness	4.92 (1.50)	5.50 (1.53)	4.34	<.001	.28	4.88 (1.55)	−.31	.755	−.02	5.60 (1.29)	5.11	<.001	.32
Personal meaning	3.27 (1.59)	3.36 (1.54)	.61	.540	.04	3.33 (1.66)	.38	.706	.02	3.47 (1.70)	1.34	.180	.09
Positivity	5.10 (1.26)	5.08 (1.33)	−.19	.852	−.01	5.13 (1.32)	.28	.777	.02	5.31 (1.19)	1.82	.069	.12
Negativity	2.19 (1.15)	2.12 (1.18)	−.68	.500	−.04	2.08 (1.05)	−1.06	.287	−.06	1.97 (1.01)	−2.23	.026	−.14

mediators to examine if these alternative mechanisms might explain the effect of the treatment conditions on sacredness judgments rather than collective meaning. The results demonstrated that the indirect effect of collective meaning was significant for all four mediation analyses (see Table 11, for 95% CIs).

Next, we conducted serial mediation analyses to examine if the effect of the treatment conditions on moral outrage might be mediated by collective meaning and sacredness judgments. We entered condition (all four; and then each treatment condition vs. control) as the predictor, moral outrage as the outcome variable, and collective meaning and sacredness judgment as serial mediators using Model 6 in PROCESS macro. We entered all significant alternative mechanisms as covariates to account for their influence on our outcome measures. We found that the indirect effect of collective meaning and sacredness was significant in all serial mediation analyses (see Table 11, for 95% CIs). These results suggest that making salient the historical significance and/or collective spirituality of an artwork, led people to view the artwork as having greater collective meaning, which increased individuals' judgment of the art as sacred, and ultimately, led to greater moral outrage when they learned the artwork had been desecrated.

Discussion

Study 5 replicated Study 4 providing additional experimental evidence for the role collective transcendence beliefs play in shaping the sacredness of art while ruling out alternative explanations. Notably, Study 5 also demonstrated a downstream experiential consequence of these effects: Higher levels of moral outrage in response to the artwork being desecrated in exchange for secular considerations (a taboo trade-off).

Study 6

In Study 6, an additional preregistered study,[9] we used the same experimental procedures as Studies 3–5 with two important extensions. First, we used an amateur work of art as our stimulus. Thus far we have demonstrated that making salient the collective transcendence of an actual work of art could elevate its perceived sacredness. If we are correct in our theorizing, then even the most amateur work of art, as long as it is believed to be collectively transcendent should be viewed as sacred. With this in mind, in Study 6, we presented participants with an amateur sketch created by the first author of the second and third authors photoshopped onto a vintage article

background (see Figure 2) to test the robustness of our theory. Second, we also included a behavioral measure to examine the real-world implications of our theorizing.

Method

Participants

As described in our preregistration, we recruited 1,050 participants from Prolific to participate in exchange for a modest payment. The system recorded 1,105 participants. One hundred forty-one participants were excluded because they failed to provide either the name of the artwork and/or one accurate piece of information (raters obtained high agreement [ICC1 = .79, ICC2 = .89]). Another six participants were excluded because they said that they knew of the art prior to participating in the study, and one was excluded because of missing key variables, leaving 957 participants in the final analysis.

Design and Procedure

The procedure of this study was the same as Study 5 except that the information provided to the participants was about the first author's sketch of the second and third authors, which we titled "The Portrait," and they also completed a behavior measure of donation (see below) instead of moral outrage. In the historical significance condition, we described how historical the sketch was by telling participants that the work of art "was created by and depicts people from almost 3,000 years ago." Participants also read that "it serves as a record of human history, showing us where we came from and linking us back to human beings that lived so many hundreds of years ago." In the collective spirituality condition, we told participants that the "people depicted in the artwork represent two followers of Buddhism." Participants also read that "This image is spiritually significant because it reminds us that inner peace and spiritual transcendence await all who are ready to receive it in their hearts." Additionally, we included a combined condition that presented both the historical significance and the collective spirituality descriptions. In the control condition, as in Study 5, participants were given information pointing out the artwork's uniqueness described in words with positive valence, without mentioning its historical significance or significance for collective spirituality.

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[9] https://osf.io/j4m2y/?view_only=12188129a165437e9482628114411a4f.

Table 11
Study 5 Mediation Analyses Results

	Sacredness as outcome			
	Predictor (X)			
Mediators (M)	All conditions	History versus control	Spiritual versus control	Two combined versus control
Collective meaning	[.06, .11]	[.04, .12]	[.16, .39]	[.09, .17]
Uniqueness	[.04, .08]	[.03, .09]	[−.06, .05]	[.03, .07]
Usefulness	[−.02, .01]	[−.07, −.01]	[.00, .13]	[−.01, .03]
	Moral outrage as outcome			
	Predictor (X)			
Mediators (M)	All conditions	History versus control	Spiritual versus control	Two combined versus control
Collective meaning → sacredness	[.02, .04]	[.01, .04]	[.05, .16]	[.02, .06]

Participants read that this sketch is "considered an important work of art because of its uniqueness" and that "even though it was created with a single stroke, it's this simplicity and vividness that make it a unique piece of art."

All participants were then asked to rate the artwork on its historical significance, collective spirituality, collective meaning (α = .86), sacredness (α = .73), usefulness (α = .92), positivity, negativity, and personal meaning as in Studies 4 and 5. After completing these measures, participants were told "We are collecting donations for *The Conservation Center*, a non-profit that seeks to safely assist with the conservation of artwork damaged by fires, floods, and natural disasters." They were also told that "a water main break at the museum that houses *The Portrait* has resulted in it being damaged and in need of restoration." Participants were then given 10 raffle tickets which can be entered into a drawing for a $50 bonus prize, and were asked "how many of your raffle tickets, if any, would you like to donate to The Conservation Center—specifically to fund the restoration of *The Portrait*." Participants indicated on a scale from 0 to 10 how much they wished to donate.

Results

All analyses presented below follow our preregistered analysis plan. We conducted a one-way ANOVA, entering condition as the between-subjects factor, followed by planned contrasts comparing

Figure 2
Stimulus Used in Study 6

Note. See the online article for the color version of this figure.

the means between each treatment condition and the control condition on all measured variables.

Manipulation Checks

We found significant differences between conditions on rated historical significance, $F(3, 953) = 125.15$, $p < .001$, $\eta_p^2 = .28$, and collective spirituality, $F(3, 953) = 16.36$, $p < .001$, $\eta_p^2 = .05$. When compared to the control, planned contrasts showed that participants in the historical significance condition rated the artwork as more historical, $M_{\text{history}} = 5.13$ ($SD = 1.39$), $M_{\text{control}} = 4.75$ ($SD = 1.40$); $t(953) = 3.21$, $p = .001$, $d = .21$, and participants in the collective spirituality condition rated it as being more collectively spiritual, $M_{\text{spiritual}} = 4.79$ ($SD = 1.47$), $M_{\text{control}} = 3.64$ ($SD = 1.65$); $t(953) = 8.72$, $p < .001$, $d = .56$. Participants in the combined condition rated the work as both more historically significant, $M_{\text{two combined}} = 5.43$ ($SD = 1.23$); $t(953) = 5.59$, $p < .001$, $d = .36$, and more collectively spiritual, $M_{\text{two combined}} = 5.76$ ($SD = 1.26$), $t(953) = 16.09$, $p < .001$, $d = 1.04$, than the control. These results therefore suggest our manipulations were successful.

Sacredness

We found significant differences between conditions on sacredness judgments, $F(3, 953) = 79.42$, $p < .001$, $\eta_p^2 = .20$, Specifically, when compared to the control, participants in each treatment condition rated the artwork as significantly more sacred (see Table 12, for means, *SD*s, significance level, and effect sizes).

Collective Meaning

We also found significant differences between conditions on collective meaning, $F(3, 953) = 26.05$, $p < .001$, $\eta_p^2 = .08$, where each treatment condition rated the artwork as significantly more collectively meaningful than the control.

Donation

We found significant differences between conditions on the number of raffle tickets participants donated to restore damages to the artwork, $F(3, 953) = 6.30$, $p < .001$, $\eta_p^2 = .02$. Specifically, when compared to the control, participants in each treatment condition donated significantly more raffle tickets.

Discussion

Study 6 provided additional experimental evidence and demonstrated this fundamental role of collective transcendence even for an amateur work of art—a sketch done by the first author of the second and third authors—highlighting how powerful collective transcendence beliefs can be in determining sacredness judgments. In Study 6, we also demonstrated real-world implications by showing that increasing collective transcendence beliefs not only led to stronger sacredness judgments but also a greater willingness to donate money to protect the work of art.

General Discussion

Across 11 studies, both inductive and deductive, we developed and tested a theory of collective transcendence beliefs as a key determinant of the sacredness of objects, using art as a case study. We find that beliefs that a cultural object links the collective to something larger and more important, spanning space and time, lead to judgments of the object as sacred. Our initial inductive studies pointed to perceptions of collective spirituality, collective meaning, and historical significance to humanity as the primary collective transcendence beliefs underlying the sacredness of art, and subsequent exploration indicated that collective meaning was a mechanism by which collective spirituality and historical significance to humanity shaped sacredness judgments. In support of this, six experimental studies demonstrated that increasing the perceived collective spirituality and the historical significance of the piece led participants to view the artwork as more collectively meaningful, and therefore more sacred (see OSM, for a meta-analysis of these studies). We demonstrated these effects across different art forms, including paintings, music, and public art, including even an amateur sketch, while also addressing a number of alternative mechanisms (see also OSM S4, for an additional study addressing other possible alternative mechanisms).

Our findings build on and contribute to existing theory in several key ways. Most importantly, our research uncovers a novel psychological mechanism underlying the sacredness observed in various cultural objects. The existing body of research looking at sacred objects has focused almost exclusively on personal objects, like wedding rings and family heirlooms to which people have a meaningful, personal connection (Belk et al., 1989; Belk & Wallendorf, 1990; McGraw et al., 2016). This literature points to self-transcendence as the key factor determining the sacredness of such objects (Belk et al., 1989; Belk & Wallendorf, 1990; McGraw et al., 2016), but there is little reason to believe sacred cultural objects, such as artifacts and works of art, are self-transcendent to many who hold them to be sacred. We put forth and empirically test a novel theory of what determines the sacredness of objects demonstrating collective transcendence beliefs as a key factor underlying their sacredness.

Our theorizing surrounding collective transcendence beliefs and their influence on sacredness judgments also challenge our current understanding of the social functions of sacredness. Durkheim (1912/2008), in some of the earliest work on the topic, described the sacred as something that "unite[s] [people] into one single moral community (p. 62)." Building on this seminal work, scholars have argued that sacredness serves to strengthen people's bond to their own communities or their in-group, such as their religious group,

family, or country (Belk et al., 1989; Belk & Wallendorf, 1990; Graham & Haidt, 2012; McGraw et al., 2016). In this way, religious icons, family crests, and national flags, all inspire group members to feel a stronger sense of unity and identification with their intimate in-groups. The current research, however, suggests that sacredness, at least when inspired by collective transcendence beliefs, can serve an even broader binding function than previously postulated. In a number of our studies, participants found artwork from a different culture or religion to be sacred. For instance, participants in Studies 4, 5, and 6 found sacredness in an artwork associated with Buddhism—a religion they did not belong to (i.e., an out-group). It may be that the sacredness we evoked in our participants via collective transcendence beliefs served a broader binding function with *all humanity*. This possibility intersects well with recent research by McFarland et al. (2013) on identification with all humanity, which uncovered the capacity for people to identify beyond their immediate in-groups to the whole "human kinship" (McFarland et al., 2012, 2013). Our findings suggest that many sacred objects, like art, may be a means through which people experience their unity with all of humanity. Indeed, by manipulating participants' collective transcendence beliefs about certain artworks, participants in Studies 5 and 6 were more willing to protect entities associated with an out-group that they personally did not identify with (i.e., Buddhism) from desecration and also experience moral outrage when such protection was failed by others. This challenges current theorizing by suggesting that sacredness judgments are not inherently parochial in nature, but instead may be shaped by (and in turn shape) connection with humanity more broadly.

By showing the mutability of participants' sacredness judgments, our work also adds nuance to findings suggesting that what is held as sacred is immutable and immune to external influence (e.g., Sheikh et al., 2013). People also tend to hold these beliefs. When asked about what is sacred to them, people typically declare that their sentiments are absolute and cannot be changed by what others think or say (Baron, 2017; Baron & Spranca, 1997; Graham & Haidt, 2012). Yet, our findings suggest that people's sacredness judgments are highly susceptible to external influences. Indeed, it is precisely what people thought others believed—how collectively transcendent an artwork was—that drove much of our participants' judgments of its sacredness. Moreover, by manipulating these beliefs, we were able to change participants' sacredness judgments. Our findings, therefore, suggest that sacredness, at least for cultural objects, can be socially constructed and are not absolute.

By focusing our investigation on the case of art, our findings also contribute to the emerging literature on the evaluation of art more generally. Our work redirects the literature's focus, which has been primarily on art's economic (Newman & Bloom, 2012) or artistic value (Stamkou et al., 2018), to its sacredness, and in so doing, draws attention to art's social and cultural value. As noted throughout the article, sacredness is distinct from artistic and economic values in that sacred entities are those for which people claim an absolute commitment toward, regardless of what that entity looks like or how much money it is worth. Moreover, while art's sacredness has been conjectured in other disciplines (Bourdieu, 1996; Kant, 1987; Pfeiffer, 1982), our systematic investigation not only provides robust empirical evidence for its sacredness but also gives greater insight into its psychological foundations. Importantly, we move beyond looking at art's artistic features as a source of sacredness by introducing collective transcendence beliefs as an

important and novel mechanism underlying art's sacredness evaluation.

Our research also has important practical implications. Most directly, our studies demonstrate a means for increasing the sacredness of art. Organizations, such as museums, galleries, or heritage sites, hoping to instill a sense of sacredness in visitors could provide clear narratives about their collections that imbue their cultural objects with collective transcendence; they could explain the work's great historical significance, collective spirituality, or collective meaning. Based on our findings, doing so should not only increase judgments of sacredness but also the various downstream benefits that accompany such judgments. For instance, as we found in Study 6, patrons may be more willing to donate money to protect those cultural objects.

Remaining Questions and Future Directions

While we believe our research makes important theoretical and practical contributions, several limitations remain that set the stage for future research.

Generalizability

We used art as a case study to develop and test novel theory, and it is unclear whether the influence of collective transcendence beliefs might go beyond art, and therefore elevate other types of objects, such as the bones of saints, geological formations, or simply a piece of rock from millions of years ago, to being held as sacred. Of note, in an effort to establish generalizability within the domain of art, we replicated our findings using established measures of sacredness with many different art forms, including painting, music, sculpture, and an amateur sketch by the first author. Albeit speculative, we believe that presenting participants with information that highlights the historical significance to humanity and/or the collective spirituality of an object should result in the participants judging most objects as sacred. Thus, all together, we believe there is little reason to think that our findings in the present research would not generalize beyond art. Of course, this is only our speculations that future research can examine further.

Potential Moderators and Individual Differences

It is also an open question as to whether other factors would influence the effect collective transcendence beliefs have on sacredness judgments. For example, as we reviewed earlier, the authenticity of art pieces is an important artistic feature that shapes art's evaluation (Newman & Bloom, 2012), which begs the question of whether we would find effects for cultural objects that are clearly not originals, but replicas. Do people imbue a copy of *Starry Night* with collective transcendence or is that only reserved for the original? Is it possible that collective transcendence beliefs underlying most cultural objects, like *Starry Night*, stem from intangible and abstract qualities that can transfer onto replicas? For example, certain cultural objects such as musical pieces are, by their nature, copies, and people find them to be sacred (see Study 3a). On the other hand, original works are seen as more authentic and attractive than replicas (Newman & Bloom, 2012), suggesting copies would be less likely to attain sacredness. Future research might examine if and how

other factors, such as the authenticity of the artwork, would shape the role collective transcendence beliefs play in attaining sacredness.

In addition, although we demonstrated across multiple experiments that collective transcendence beliefs help shape sacredness judgments; in these studies, we only introduced collective transcendence beliefs that were positive in nature. We led participants to believe the artwork had positive historical significance to humanity and yielded positive collective spirituality, and these ultimately led participants to believe the artwork had positive collective meaning. Yet, collective transcendence beliefs do not necessarily have to be positive in nature. A cultural object could have great historical significance to humanity, for example, because it represents something tragic or atrocious. For instance, Hitler's *Mein Kampf* is a cultural object that has great historical significance as it helped bring about World War II and the genocide of millions of Jews and Roma. A quick thought experiment would suggest that these objects are unlikely to be seen as sacred because they arouse horror and disgust rather than honor and reverence. Yet, as Durkheim (1912/2008) argued, there is another dimension of the sacred, connected with "misfortune, anything that is ominous, and anything that motivates feelings of disquiet or fear (p. 392)." In this sense, the sacred can also include "evil and impure powers, bringers of disorder, causes of death and sickness, instigators of sacrilege (p. 412)." It is, therefore, possible that even collective transcendence beliefs with a negative valence can also increase perceptions of sacredness, a possibility that awaits future research.

While we have shown the powerful influence people's own beliefs about an object's collective transcendence have on their sacredness judgments, it is unclear whether these beliefs are accurate, or can be viewed as a misprediction. In other words, it is unclear whether people's beliefs about the collective transcendence of art are over- or underestimates. While we do not empirically assess the accuracy of self versus other beliefs, our theorizing can lay out predictions that could be tested in future work. Specifically, given our theorizing around second-order beliefs, to the extent that people are perceiving high levels of collective transcendence of a given object, its sacredness should increase; in line with research on pluralistic ignorance, this should hold regardless of the accuracy of these judgments (e.g., Prentice & Miller, 1993). It is also possible that greater alignment between individuals' private beliefs and their expectations of others should strengthen the effect (e.g., I believe the art is collectively transcendent, and many others do as well) versus lesser alignment (e.g., it is not sacred to me, but is to many others) in an additive fashion, but this requires further empirical testing.

Furthermore, we focused on understanding how characteristics of objects influence people's sacredness judgments, but future research can fruitfully explore whether individual differences may moderate these results. For example, a significant theoretical advancement of our research is finding sacredness can foster a sense of unity with all humanity. Considering this, future research may explore whether trait-level identification with all of humanity moderates the effect of collective transcendence beliefs on people's sacredness judgments, such that collective transcendence beliefs have a particularly large influence among high identifiers.

Additionally, group membership may also moderate our effects. Specifically, the influence of collective transcendence beliefs on sacredness might be stronger for individuals who perceive the artwork as a symbol of their membership in an important social

group. For example, Americans in the collective transcendence conditions in Study 3c might find the public art to be more sacred than non-Americans because the artwork is American centric. Likewise, Buddhists (compared to non-Buddhists) in the collective transcendence conditions might find the painting in Study 4 more sacred because it focuses on Buddhism. To understand the role group membership might play, additional studies should look at group membership as a possible moderator.

Finally, we tested our theory among lay audiences of art—people who have little expertise in the domain of art, and although we found consistent effects within this population, it is unclear whether we would find similar effects among art experts. It is possible that social and cultural beliefs about a work of art would affect experts less than they did among our participants. Experts might instead draw on their knowledge and appreciation for a work's artistry (i.e., the various elements of composition—e.g., color combinations, intensity), ignoring what the masses may believe. If so, this would render collective transcendence beliefs less relevant in experts' sacredness judgments.

Other Mechanisms

Our research focused primarily on the role of beliefs in shaping sacredness judgments. There is room for further exploration of how emotion may contribute to this process. For example, it is possible that positive moral emotions can play a role in shaping the sacred experience, given their link to transcendence (Yaden et al., 2017). Future research can help uncover which positive emotions, such as awe (Piff et al., 2015), play a part in collective transcendence beliefs shaping sacredness judgments.

Another possible factor that may play a role in collective transcendence beliefs influencing sacredness judgments is providing a narrative. Past research showed that simply telling a story about a piece or object can increase people's liking and willingness to pay for that object (Newman, 2018). We believe that simply having a narrative is unlikely to explain the current effects, given that participants in the control conditions were also given a narrative about the artwork (e.g., about its uniqueness or positive artistic elements), and they nonetheless rated the artwork as less sacred than did participants in the experimental conditions. It does, however, raise the possibility that having a narrative of any sort might help elevate the importance of an object and potentially begin to elicit notions of sacredness. It may be that narratives provide a scaffold for viewing something as sacred, but narratives that evoke collective transcendence substantially build on that scaffold. In this sense, narratives may be a necessary, but insufficient condition for sacredness judgments.

Conclusion

Many objects, such as certain works of art, are held as sacred. The current research explored why these objects attain their sacredness using art as a case study, finding clear evidence that collective transcendence beliefs play a key role. In addition to providing a novel theoretical perspective, we also introduced a useful means for increasing sacredness judgments, which may help to facilitate the maintenance and preservation of objects that are meaningful to humanity as a whole. In all, we hope this research generates new questions and ideas about what is sacred and why.

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