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# GLOBAL CITIZEN 2.0: TRANSHUMANISM AND COLLECTIVE IDENTITY

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## Abstract

As the world becomes ever-expanding through internationalization and digitization of human connection, the ideologies of global citizenship and transhumanism have become prescient political projects in the United States. Global citizenship promotes an expanded sense of self which embraces peoples and cultures from around the world and is predicted by a normative environment and global awareness (Reysen & Katzarska-Miller, 2013a). Global citizenship identification robustly predicts prosocial values related to intergroup helping and empathy, environmentalism, and social justice. Transhumanism, advocates for the use of technological advancements to improve well-being and reduce suffering in humanity (Bostrom, 2005). Transhumanists tend to promote interconnectedness of humanity and think of technological intervention as a means to manage the evolutionary trajectory of the species. The present study aimed to assess the relationship between global citizenship identification and transhumanist orientation via a survey of college students ( $N = 1,069$ ). Results indicated that transhumanist orientation is a reliable, positive predictor of global citizenship identification, antecedents of identification, as well as prosocial outcomes. The findings inform the way we conceptualize identity in an increasingly globalized world facilitated by technological advancement.

## Introduction

The world is ever-expanding in its interconnectedness via international immigration, multinational institutions, and digitally mediated human communication. Citizens are now more connected than ever to other cultures in professional, personal, and consumptive contexts, which has led to changes in the individual's self-concept toward a more global orientation. Scholars have captured these changes through the lens of global citizenship identification, which considers the ways people identify with and are promoted to act on behalf of the global community (Reysen & Katzarska-Miller, 2018). At the same time, through the advancement of science and technology, the concept of what it means to be human is being interrogated through the socio-political movement of transhumanism (Bostrom, 2005). Transhumanists challenge the passivity of humanity in its evolutionary journey and advocate for the "management" of our future through technological interventions to improve the lives of others (Bostrom, 2005). Collectively, both of these orientations

facilitate moving beyond the self and one's own temporal and cultural context to imagine what it means to be human and our responsibility to create our future as a species. The present study aimed to capture the relationship between global citizenship identification and transhumanism.

### **Global Citizenship Identification**

Global citizenship is a suite of positive beliefs regarding the expanding nature of humanity, which includes people, perspectives, and cultures from across the globe. Grounded in a social identity approach (Tajfel & Turner, 1979; Turner et al., 1987), global citizenship is an inclusive identity category held by those who embrace values of social justice, environmentalism, and responsibility to act for the inclusion of diversity in the world (Reysen et al., 2013). Global citizenship identification, like other ingroup identification categories, is the central variable that predicts one's alignment with group norms; thus, those who hold a higher identification with global citizens are likely to behave in ways that are consistent with the group's values of diversity, justice, and inclusion of others. Within the research literature, global citizenship identification is situated within a well-documented model of antecedents and outcomes (Reysen & Katzarska-Miller, 2013a).

The predictors of global citizenship identification involve a global awareness, which includes feelings of connectedness to others in the world and a perceived knowledge of the world and its diverse cultures, as well as socializing within a normative environment that promotes global citizenship identification. Normative environments can be found in educational settings, which prioritize literacy in cultural diversity (Reysen & Katzarska-Miller, 2018), through engaging with people who have high global citizenship identity or foster global citizenship in their social spheres, or interactions with peoples or cultural products from around the world (Reysen et al., 2021). In addition to reliable antecedents, past research has also demonstrated the stable outcomes of global citizenship identification (Reysen & Katzarska-Miller, 2018). For example, high identification with global citizenship is related to high intergroup empathy, support for social justice issues, engagement in environmentalism, helping members of other groups, and feeling a moral responsibility to act in ways that benefit the world.

### ***Prosocial Values and Global Citizenship***

The cornerstone of global citizenship rests in its prosocial outcomes, including: global awareness, social justice, and environmentalism. For example, global citizenship is strongly associated with an increased knowledge about other cultures, a desire to attend cultural events, and an endorsement of multiculturalism and internationalization (Katzarska-Miller et al., 2014; Reysen & Katzarska-Miller, 2017; Reysen, Katzarska-Miller et al., 2013; Reysen, Pierce et al., 2013). Along with these multicultural values, high identity is also associated with a belief in social justice, which includes valuing diversity, human rights, peace, and diplomacy between nations (Reysen & Katzarska-Miller, 2013b). Additionally, the construct is associated with a concern for the environment and global warming, which includes intentions to live in environmentally sustainable ways (Katzarska-Miller et al., 2012; Reysen & Katzarska-Miller, 2013a; Reysen, Pierce et al., 2013). Further, identification is associated with positive attitudes toward technology and social media usage (Lee et al., 2017). Collectively, the outcomes of global citizenship identification point to an embrace of liberal political positions in North America and Europe (Katzarska-Miller et al., 2014). However, past research has been critical of the project of global citizenship due to its ties to Western imperialism and Enlightenment anthropocentrism.

Arneil (2007) identified that liberal, American empire advances parallel projects of economic globalization and global citizenship as a means to secure the nation-state through

socio-cultural and economic conquest of other countries. They argued that global citizenship is akin to “manifest destiny,” in that it organizes moral legitimacy for the exploitation of other countries to enrich the colonizing nation-state. Thus, global citizenship both relies on and attempts to distance itself from colonization. Kofman (2005) and Yemini and Maxell (2018) posited that global citizenship is a middle-class ideology, which manifests within the context of secure nation-states, as they provide the institutional protections for affluent citizens to be flexible with their political self-concepts and facilitate the capital necessary to engage in labor, learning, and leisure in international contexts.

Bowden (2003) explained that global citizenship is uniquely efficient at justifying imperialism due to its grounding in Enlightenment concepts of humanity. He argued that global citizenship relies on individualism, which privileges the individual first and considers their relationship to others as arbitrary, to advance a political project which envisions a “single human destiny.” When individualism is actualized it necessitates an anthropocentric application, which privileges the Western individual’s experience of globalization over other humans, animals, and the environment at large, which must conform to the cosmopolitan empire (Pepper, 2016). Cavanagh (2020) demonstrated this process in South Korea, where universities who engage in global citizenship initiatives also require students to pass English-proficiency exams and conform to the teaching and learning expectations of the West. Thus, the “shared destiny” of individuals become manifest in international relations, where Europe and North America constitute the ideological center and other countries must conform to gain access to the empire.

For the purposes of the present study, global citizenship is conceptualized as a social identity construct, which is downstream of the global, socio-economic policies of Western nations. Thus, it is reasonable to propose that despite imperial ties, those who hold a global citizenship identity are likely not going to endorse colonial policies of their home nation. However, as Kofman (2005) and Yemini and Maxell (2018) proposed, there is quantitative evidence that global citizenship and cosmopolitan identity are associated with wealth and the self-esteem and self-efficacy as a result of feeling prosperous (Manokara et al., 2024). Thus, future research could explore how imperialist policies take root and affect the psychology of citizens.

### **Transhumanism**

Transhumanism is an umbrella term for a suite of socio-political philosophies that argue the future of humanity can, and should, be managed by humanity through technological advancement (Bostrom, 2005). Transhumanists tend to advocate for technological advancement that prioritizes the enhancement of life expectancy and quality, as well as the decrease of suffering and disease (Manzocco, 2019). To achieve these ends, transhumanists argue for morphological freedom, which is the right of individuals to alter their bodies to improve physical, intellectual, and emotional well-being (e.g., performance enhancing pharmaceuticals, cognitive enhancing technologies; Earle, 2021). However, these technological changes are a means to an end, which ultimately contribute to the development of The Singularity, whereby humanity becomes unified within a digitally mediated ecosystem in perpetuity. To best bring about The Singularity, transhumanists advocate for the development and use of experimental and futuristic technologies, including, but not limited to, gene therapy, mind uploading technologies, cloning, and nanotechnology (Benedikter et al., 2017; Kreowski, 2017; Morales, 2009; Uzomah, 2022).

Within the general public, transhumanism is controversial (Sinicki, 2015). Past research has indicated that both conservatism and social justice orientations tend to reject transhumanism (Laakasuo et al., 2018; Laakasuo et al., 2021; Lantian & Rose, 2022; Koverola et al., 2020a; Koverola et al., 2022). However, acceptance of transhumanism is

predicted by the Dark Triad trait Machiavellianism, as well as openness to experimental technology when it seems easy to utilize (Gangadharbatla, 2020; Laakasuo et al., 2021; Schönthaler et al., 2022). Additionally, those who have an interest in science fiction, or are involved in a fan community (e.g., Star Wars, anime, furies), tend to also have positive views of transhumanism (Brooks et al., in press; Koverola et al., 2022). Further, past research has indicated that transhumanism can be appealing to those involved in religion or as a means for engaging in terror management (Armesilla Conde, 2021; Reysen et al., accepted).

### ***Prosocial Values and Transhumanism***

As previously mentioned, transhumanism is an umbrella term for a diversity of socio-political views that emphasize the use of technology to enhance and transform humanity's evolutionary trajectory (Bostrom, 2005). However, unlike global citizenship, there is currently a dearth of research on the prosocial outcomes of those who endorse transhumanism. Philosophically, transhumanists generally share the ethos of Vita-More (2008, 2019, 2020), who argued for a transhumanism which aims to improve the world and humanity ethically and holistically. For example, Vita-More (2020) described the transhumanist project as one which promotes inclusivity and plurality in society, with a focus on giving people agency to make decisions about how they would like to live, how long they would like to live, and if they want to engage with technologies to improve their life. Despite political differences in technological distribution, there does seem to be a generally shared emphasis on prosociality across transhumanist thinkers (Bastani, 2019; Hughes, 2004; Noonan, 2021; Williams & Srnicek, 2013). However, Hauskeller (2016) argued that transhumanism suffers similar issues to global citizenship whereby it relies on the Enlightenment individualism, whereby the "human" is an individual, who is disconnected from their socio-cultural context, despite being a unit of a shared species destiny. Thus, transhumanism conforms to the contours of anthropocentrism, which idealizes the Western individual over all other concepts of humanity, limiting its effectiveness at addressing issues related to environmentalism and justice (Sorgner, 2014).

For example, Bardziński (2015) identified that the transhumanist project is philosophically anemic with regard to environmental concerns, both in terms of the potential harm of technology on the environment, as well as the harm of technology on humanity itself as a contributing component of nature. Varona (2021) takes this argument a step further and asserts that because transhumanism is anthropocentric, it creates an illusion that all progress is inevitable, thus eliminating accountability for the harms inflicted on the environment. Regarding issues of social justice, transhumanism is also mixed. For example, Persson and Savulescu (2010) argued that transhumanism should focus not just on physical and psychological enhancement, but also on moral enhancement for a future humanity. In line with this position, feminist scholars have argued that transhumanism may carve out new ways of expressing personal freedom and bodily autonomy through the dissolution of the gender binary and sexed bodies (DeBaets, 2011; Reverter, 2022). However, Hilvoorde and Landeweerd (2010) warn that the alteration of the body through technological intervention may only reproduce, or perhaps exaggerate, the current hierarchies of privilege, especially as it relates to able and disabled bodies. Further, Yeşilkaya and Umut (2022) emphasized that transhumanism in its current state is ill-prepared to seriously consider what a "just society" is and how to achieve it, as it has not rigorously considered the implications of its utopian imaginings outcomes.

### **Global Citizen 2.0**

Based on the reviewed literature, the present study aimed to understand the relationship between global citizenship identification and transhumanism. Global citizenship

is an identity category, which is reliably predicted by the antecedents of a global awareness and residing in a normative environment which promotes identification (Reysen & Katzarska-Miller, 2013a). Additionally, identification predicts a series of prosocial outcomes (e.g., environmentalism, a belief in social justice, intergroup positivity, and feeling a responsibility to make the world a better place), which point toward an orientation toward Western, liberal politics (Katzarska-Miller et al., 2014). Transhumanism differs in that it is a general agreement that technology should be utilized to limit suffering, illness, and disease, while at the same time enhancing human's cognitive, physical, and emotional experiences (Bostrom, 2005); however, transhumanism is a universal project, which expresses itself through many different political movements (Bastani, 2019; Hughes, 2004; Noonan, 2021; Williams & Srnicek, 2013). Together, these constructs share a philosophical alignment with Western Enlightenment conceptualizations of the individual as the core unit of society, who participates in a shared destiny with other humans toward a unified, global world.

As both global citizenship and transhumanism are rooted in a similar philosophical orientation, they share many features. For example, both have an interest in an expanded sense of self; global citizenship seeks to integrate peoples from different cultures, while transhumanism challenges contemporary humans to imagine how they can utilize the technologies of today to transform in the future (Bostrom, 2005; Reysen & Katzarska-Miller, 2017). Additionally, both have a focus on bodily autonomy, where global citizenship emphasizes aspects of social justice, while transhumanism emphasize morphological freedom (DeBaets, 2011; Reverter, 2022; Reysen & Katzarska-Miller, 2013b). Both ideologies are manifestations of anthropocentrism, where humanity is the privileged category and issues related to environmentalism and justice are understood in relation to the how it influences humans (Pepper, 2016; Varona, 2021). Further, both have been critiqued for their concept of humanity, based in individualism, which relies on imperialism to enforce onto non-Western cultures (Arneil, 2007; Bowden, 2003; Hauskeller, 2016; Sorgner, 2014). Lastly, both constructs are associated with interest in and use of social media and technology (Gangadharbatla, 2020; Laakasuo et al., 2021; Lee et al., 2017; Schönthaler et al., 2022).

### **The Present Study**

There exist gaps of knowledge regarding global citizenship, transhumanism, and prosociality. First, it is uncertain if the ethical posturing of transhumanist scholars translates to prosociality in those who endorse transhumanism. Second, research has demonstrated that global citizenship and transhumanism share both a philosophical tradition and similar political values; however, it is unclear as to the exact relationship these orientations have to one another. Thus, the present study aimed to address these questions via a digital survey of participants who were asked to indicate their support for global citizenship, its antecedents and outcomes, as well as transhumanist orientation. First, it was hypothesized that transhumanism would generally be associated with prosociality, similar to global citizenship, as both ideologies are concerned with humanity, diversity, and shared identity with others (DeBaets, 2011; Reverter, 2022; Reysen & Katzarska-Miller, 2013b). Additionally, it was hypothesized that transhumanist orientation would predict global citizenship identification, as transhumanism may be considered a more universal political ideology, which can be expressed in both left and right-wing political movements (Bastani, 2019; Hughes, 2004; Noonan, 2021; Williams & Srnicek, 2013); global citizenship is generally considered a liberal, political project (Katzarska-Miller et al., 2014). Further, transhumanism may also provide the context for a larger group identity than global citizenship, as it focuses not just on all of humanity in the present, but humans who have already lived or are yet to be born (Bostrom, 2005; Reysen & Katzarska-Miller, 2017).

## Method

### Participants and Procedure

Participants ( $N = 1,069$ , 81.4% female;  $M_{\text{age}} = 21.61$ ,  $SD = 6.34$ ) included undergraduate students at Texas A&M University-Commerce participating for extra credit or course credit toward a psychology class. Participants indicated their ethnicity/race was White (42.8%), Hispanic (23.9%), Black (23.1%), multiracial (5.0%), Asian (2.8%), other (0.7%), Native American (0.6%), Middle Eastern (0.6%), or Central Asian (0.6%). Participants completed measures regarding attitudes toward transhumanism and antecedents and outcomes of global citizenship identification. All items used a 7-point Likert-type response scale, from 1 = *strongly disagree* to 7 = *strongly agree* (see Table 1 for means, standard deviation, reliability).

## Materials

### Transhumanism

We adopted a measure of support for transhumanism from prior research (Brooks et al., in press). Following a prompt “I believe people should...” participants rate five items (“support cloning to extend life,” “use gene therapies to ward against aging,” “upload one’s mind to a supercomputer before death,” “use nanotechnology to enhance human abilities,” and “use technology to evolve humankind”) to assess a positive attitude toward transhumanism.

### Global Citizenship Identification Model

To assess the antecedents and outcomes of global citizenship identification, we adopted measures from prior research (Reysen & Katzarska-Miller, 2013a; Reysen et al., 2012). Four items (e.g., “Most people who are important to me think that being a global citizen is desirable”) assessed the perception that others in one’s normative environment prescribe a global citizen identity. Four items (e.g., “I believe that I am connected to people in other countries, and my actions can affect them”) assessed global awareness. Two items (e.g., “I strongly identify with global citizens”) assessed global citizenship identification. Two items (e.g., “I am able to empathize with people from other countries”) assessed intergroup empathy. Two items (e.g., “I would like to join groups that emphasize getting to know people from different countries”) assessed valuing diversity. Two items (e.g., “Those countries that are well off should help people in countries who are less fortunate”) assessed social justice beliefs. Two items (e.g., “Natural resources should be used primarily to provide for basic needs rather than material wealth”) assessed environmental sustainability. Two items (e.g., “If I could, I would dedicate my life to helping others no matter what country they are from”) assessed intergroup helping. Lastly, two items (e.g., “It is my responsibility to understand and respect cultural differences across the globe to the best of my abilities”) assessed a felt responsibility to act for the betterment of the world.

## Results

We first conducted zero-order correlations (see Table 1). All of the variables were positively correlated with the exception of transhumanism and intergroup helping, which confirmed the first hypothesis that transhumanism would be associated with prosociality. Next, to test the influence of transhumanism on the model of antecedents and outcomes of global citizenship identification we conducted a structural equation model using Amos 19 (bias-corrected bootstrapping, 5,000 iterations, 95% confidence intervals). Due to the related nature of the prosocial values to one another (and the antecedents to one another), the disturbance terms for these sets of variables were allowed to covary. Identical to Reysen and Katzarska-Miller (2013a), the error terms of two global awareness items were also allowed to

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covary. The predicted model fit the data relatively well,  $\chi^2(297) = 1704.05$ ,  $p < .001$ ; RMSEA = .067, CI [.064, .070], NFI = .904, CFI = .919.

Table 1

*Means, Standard Deviation, Alpha, and Correlations between Assessed Variables*

Variable	1	2	3	4	5	6	7	8	9	10
1. Transhumanism	--	--	--	--	--	--	--	--	--	--
2. Normative Environment	.20*	--	--	--	--	--	--	--	--	--
3. Global Awareness	.16*	.47*	--	--	--	--	--	--	--	--
4. Global Citizenship ID	.18*	.70*	.57*	--	--	--	--	--	--	--
5. Intergroup Empathy	.11*	.32*	.58*	.44*	--	--	--	--	--	--
6. Valuing Diversity	.11*	.36*	.56*	.41*	.57*	--	--	--	--	--
7. Social Justice	.11*	.28*	.38*	.23*	.47*	.54*	--	--	--	--
8. Environmentalism	.15*	.33*	.49*	.30*	.48*	.51*	.69*	--	--	--
9. Intergroup Helping	.05	.28*	.44*	.26*	.46*	.56*	.64*	.62*	--	--
10. Responsibility to Act	.11*	.41*	.56*	.45*	.50*	.62*	.50*	.55*	.64*	--
Mean	2.74	3.89	4.37	3.52	4.84	4.88	5.72	5.50	5.62	4.63
Standard Deviation	1.28	1.29	1.24	1.43	1.44	1.43	1.21	1.32	1.32	1.43
$\alpha$	.85	.90	.81	.92	.79	.82	.74	.83	.76	.71

Note. \*\* $p < .01$ .

As shown in Figure 1 (Table 2), transhumanism predicted greater normative environment and global awareness. Normative environment and global awareness predicted global citizenship identification. Global citizenship identification predicted intergroup empathy, valuing diversity, social justice, environmental sustainability, intergroup helping, and felt responsibility to act. The indirect effect of transhumanist attitudes was reliably mediated by normative environment and global awareness on global citizenship identification (see Table 3 for standardized betas of indirect effects and 95% bias-corrected confidence intervals; all indirect effects were significant at  $p < .001$ ). Greater support for transhumanism also significantly predicted greater prosocial values through normative environment, global awareness, and global citizenship identification. Normative environment and global awareness on prosocial values was reliably mediated by global citizenship identification.

Table 2

*Direct Effects*

Path	$\beta$	CI <sub>L</sub>	CI <sub>U</sub>
Transhumanism → Normative Environment	.22	.155	.291
Transhumanism → Global Aware	.15	.075	.228
Normative Environment → Global Citizen	.58	.513	.648
Global Aware → Global Citizen	.34	.266	.417
Global Citizen → Intergroup Empathy	.53	.468	.592
Global Citizen → Diversity	.49	.421	.554
Global Citizen → Social Justice	.29	.219	.361
Global Citizen → Environmental Sustainability	.38	.311	.441
Global Citizen → Intergroup Helping	.31	.244	.378
Global Citizen → Responsibility to Act	.57	.488	.641

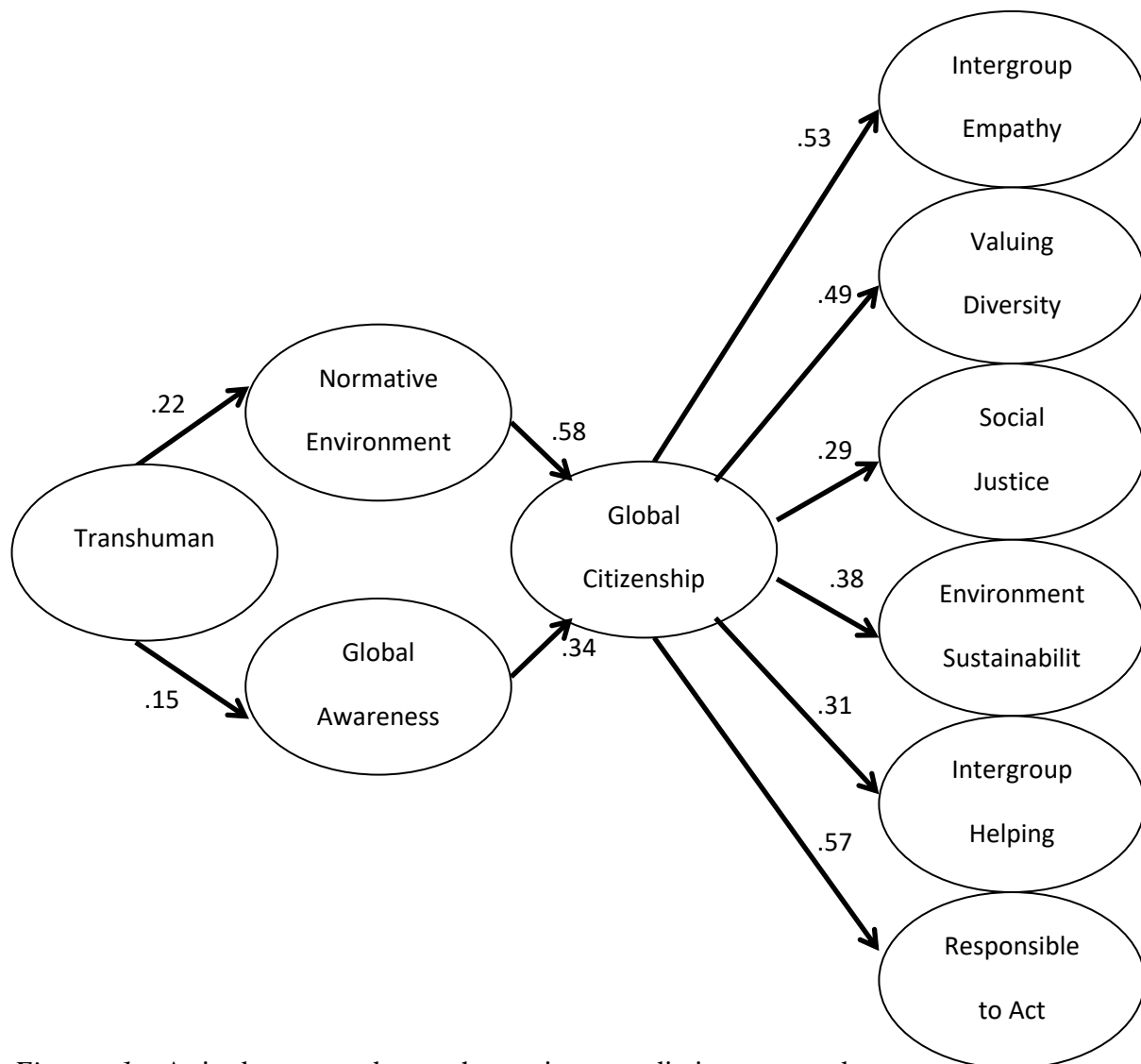
*Note.* All paths are significant at  $p < .001$ . Standardized betas presented.

Table 3

*Indirect Effects of Transhumanism, Normative Environment, and Global Awareness*

Variable	Transhumanism			Normative Environment			Global Awareness		
	Indirect	CI <sub>L</sub>	CI <sub>U</sub>	Indirect	CI <sub>L</sub>	CI <sub>U</sub>	Indirect	CI <sub>L</sub>	CI <sub>U</sub>
Global Citizenship ID	.18	.126	.238	--	--	--	--	--	--
Intergroup Empathy	.10	.065	.132	.31	.270	.356	.18	.133	.236
Valuing Diversity	.09	.060	.124	.29	.242	.332	.17	.121	.221
Social Justice	.05	.033	.079	.17	.126	.218	.10	.068	.139
Environmentalism	.07	.045	.098	.22	.180	.266	.13	.090	.172
Intergroup Helping	.06	.037	.082	.18	.141	.225	.11	.074	.148
Responsibility to Act	.10	.069	.143	.33	.280	.385	.19	.139	.253

*Note.* Standardized betas and 95% confidence intervals, bias-corrected bootstrapping with 5,000 iterations, all indirect effects are significant at  $p < .001$ .



*Figure 1.* Attitudes toward transhumanism predicting antecedents, identification, and outcomes of global citizenship.

## Discussion

The purpose of the present study was to understand the relationship between global citizenship, transhumanism, and prosociality. Two hypotheses were tested and confirmed. The first was that transhumanism would be associated with prosociality and the results indicated that high transhumanist orientation was related to the prosocial outcomes of global citizenship sans intergroup helping. Second, it was hypothesized that transhumanism would predict higher identification as a global citizen. The hypothesis was confirmed, as transhumanism positively predicted the antecedents, identification, and prosocial outcomes of global citizenship. Thus, while politically distinct from global citizenship, transhumanism may facilitate global citizenship identity. Together, the results indicate that transhumanism may represent another face of cosmopolitan politics, which concerns itself with building global connection and fostering a shared identity with people across cultural differences.

While proponents of transhumanism emphasize the ethics of their political project, research on the prosocial outcomes of holding transhumanist beliefs have not been conducted. It was anticipated that there might be a general relationship between prosociality and transhumanism, as past scholarship from transhumanists have articulated their values for issues related to diversity, equity, environmentalism, and social justice (Vita-More, 2008,

2019, 2020). However, there are serious critiques of transhumanism from scholars who have identified that the project is not adequately prepared to substantively address issues of justice or environmentalism (Bardziński, 2015; Hilvoorde & Landeweerd, 2010; Yeşilkaya & Umut, 2022). The present findings indicate that despite the limitations of the transhumanist project itself, the endorsement of transhumanist belief is related to a series of prosocial outcomes, including intergroup empathy, valuing diversity, social justice, environmentalism, and feeling a responsibility to act for the betterment of the world. Interestingly, transhumanism was not associated with intergroup helping; however, through the SEM, transhumanism did indirectly predict the construct. Thus, the findings suggest that transhumanist orientation alone might not lead to direct intergroup helping, but that it provides the underlying values necessary for parallel political projects to channel into action.

Regarding the antecedents of global citizenship, transhumanism positively predicted both global awareness and normative environment. Transhumanism generally promotes a broader perspective on what it means to be human and humanity's role in the world (Bostrom, 2005). For example, transhumanists are invested in ways humans can increase their interconnectedness to develop The Singularity (Earle, 2021), which would involve considering how integration of the species across borders could be facilitated. Thus, it was not surprising that participants who scored high in transhumanist orientation would also be more likely to endorse the antecedents of global citizenship. When considering the past literature on increasing global citizenship identification (Blake et al., 2015; Reysen et al., 2021; Snider et al., 2013), it may be valuable to consider the influence transhumanism may play in fostering a personal sense of global awareness, which would then promote identification.

Transhumanism is a universal political project, which is expressed through specific political movements (Bostrom, 2005); thus, it could also be that transhumanism serves as an overarching theory of humanity, which is then expressed through global citizenship identification. The present findings support this proposition, as transhumanism was both associated with and indirectly predicted global citizenship identification. Both transhumanism and global citizenship are both expressions of anthropocentrism rooted in the Enlightenment conceptualization of individualism (Pepper, 2016; Varona, 2021). Further, both ideologies also rely on the outcomes of Western imperialism and globalization in that it provides a secure nation-state, access to resources from the global south for economic development, and the commodification of peoples and cultural artifacts for consumption for these ideologies to flourish (Arneil, 2007; Bowden, 2003; Hauskeller, 2016; Sorgner, 2014). Both transhumanism and global citizenship could be conceptualized as utopian ideologies of the affluent within the core of the cosmopolis to conceal the negative outcomes of empire (Kofman, 2005; Yemini & Maxell, 2018).

In addition to the antecedents and identification with global citizenship, transhumanism also indirectly predicted the prosocial outcomes of global citizenship identification. As reviewed in the introduction, there seems to be significant overlap between the two ideologies regarding prosociality (Vita-More, 2008, 2019, 2020), bodily autonomy (DeBaets, 2011; Reverter, 2022), and increased moral behavior (Persson & Savulescu, 2010). We were surprised to see transhumanism predicting social justice and environmentalist outcomes, as past research has suggested that transhumanism is ill-equipped to meaningfully address issues related to justice and the environment (Bardziński, 2015; Hilvoorde & Landeweerd, 2010; Varona, 2021; Yeşilkaya & Umut, 2022). However, similar critiques have been levied toward global citizenship (Arneil, 2007; Bowden, 2003; Cavanagh, 2020; Pepper, 2016), which still maintain a robust model of prosocial outcomes (Katzarska-Miller et al., 2014; Reysen & Katzarska-Miller, 2017; Reysen, Katzarska-Miller et al., 2013; Reysen, Pierce et al., 2013). Thus, it is pertinent to underscore the difference between the political

theorizing of transhumanism and global citizenship, and the adoption of these ideology in the public.

Lastly, the results of the present study could be influenced by the general interest in science and science fiction. For example, communities like the anime fandom demonstrate a high degree of interest in science fiction engagement and global citizenship identification (Reysen et al., 2020). Further, enthusiasts of unidentified flying objects also tend to have a higher global citizenship identification when accounting for their general interest in space (Bello et al., under review). In college student, interest in technology and social media is also related to global citizenship (Lee et al., 2017). Regarding transhumanism, Geraci (2011) argued that science fiction functions as evangelical literature for transhumanism, as it encourages consumers to expand their perspective of the self to include both humanity and the universe as a whole. Confirming this observation, Koverola and colleagues (2022) reported that the highest endorsement of techno-futurism came from those who engaged in science fiction hobbyism. Further, past research has found that those belonging to the Star Wars, anime, and furry fandoms were also more open to transhumanism—fandoms known for their interest in science fiction (Brooks et al., in press; Reysen et al., accepted). Thus, interest in science and science fiction may facilitate a broader identity concept that includes all humans.

### **Limitations and Future Directions**

The present study presents novel findings regarding the relationship between global citizenship and transhumanism; however, there are some important limitations to consider. First, the present study relied on a sample of university students, which may not reflect the attitudes of the general public. However, the mean support for transhumanism in the present sample reflected past findings regarding negative perceptions of the transhumanist project (Brooks et al., in press; Laakasuo et al., 2018; Laakasuo et al., 2021; Lantian & Rose, 2022; Koverola et al., 2020; Koverola et al., 2022; Sinicki, 2015). One explanation of this could be due to the high proportion of women represented in the sample, as men tend to be more open to transhumanism than women (Brooks et al., in press). We assessed gender as a covariate; however, the model remained unchanged. Thus, it would be pertinent for future research on the subject to expand participant recruitment to increase generalizability.

Transhumanism and global citizenship have been critiqued as cosmopolitan ideologies, which may manifest primarily in affluent citizens of North America and Europe (Kofman, 2005; Yemini & Maxell, 2018). Yet, no cross-cultural, quantitative research on transhumanist orientation has been conducted. Regarding global citizenship, past research has indicated that participants from outside dominant, economic powers (e.g., Bulgaria and India) had stronger global citizenship identification than Americans (Katzarska-Miller et al., 2012). Thus, there may be differing environmental norms for those within the cosmopolis versus those outside of it; for example, Cavanagh (2020) described how South Korean universities were actively engaged in developing global citizenship identification in students, which suggests that higher personal endorsement of global citizenship could act as a means to participate in cosmopolitanism for those on the outskirts of empire. There is an opportunity for future work to clarify the relationship between transhumanism and global citizenship by sampling outside of the Western countries, particularly from individuals who travel to North America and Europe for work or school.

Additionally, there are other considerations for interpreting the findings outside of participant characteristics. The findings are correlational and should not be interpreted as causal; the present study has only determined that a predictive relationship exists between the two constructs, and future research would be necessary to determine causation. Further, the constructs utilized in the present study are psychological in nature and do not account for

behavioral outcomes related to social justice, environmentalism, or helping behaviors. Future work will be needed to assess how the prosocial outcomes of global citizenship and transhumanism manifest in relation to helping behaviors, advocacy, adoption of technology, and intergroup interactions.

## Conclusion

Considering the significant changes of the 21<sup>st</sup> century regarding technology, human connection, and political engagement, the present study contributes to the growing body of knowledge regarding how global awareness connects us to others across space and time. Global citizenship and transhumanism represent political projects which operate to facilitate a shared identity with other humans across cultures (Bostrom, 2005; Reysen & Katzarska-Miller, 2018). While distinct, both ideologies predict a series of individual prosocial values, but have also been criticized for their relationship with Western imperialism, Enlightenment individualism, and anthropocentrism (Arneil, 2007; Bowden, 2003; Hauskeller, 2016; Kofman, 2005; Pepper, 2016; Sorgner, 2014; Varona, 2021; Yemini & Maxell, 2018). The findings of the present study demonstrated that the public adoption of these ideologies is highly related, and that a belief in transhumanism may facilitate global citizenship identification. While more work is necessary to verify the findings of the present study, it seems clear that there is a shift in what it means to be human as we imagine and reimagine what the future holds for the species.

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