Examining How Projections About the Future of Society Are Related to Present-Day Climate Change Action

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ABSTRACT

Global climate change will affect all domains of person-environment relations. Tackling climate change will require social change that can be motivated by people's imaginings of the future of their society where such social change has occurred. We use the "collective futures" framework to examine whether beliefs about the future of society are related to present-day intentions to take climate change action. Participants from two Brazilian samples imagined their society in 2050 where climate change was mitigated and then rated how this future society would differ from Brazilian society today in terms of societal-level dysfunction and development and personal-level traits and values. To the extent that participants believed preventing climate change would result in societal development and more competence traits, they were more willing to engage in environmental citizenship activities. Individual differences in future time perspective also impacted environmental citizenship intention. Societal development and consideration of future consequences seem to be distinct routes by which future thinking influence climate change action.

Keywords: Climate change; future thinking; environmental citizenship; collective futures.

RESUMO

Examinando como as Projeções Sobre o Futuro da Sociedade São Relacionadas com as Ações Atuais de Combate às Mudanças Climáticas

A mudança climática afetará todos os domínios das relações pessoa-ambiente. Combater este fenômeno exigirá mudanças sociais que possam ser motivadas por visões de futuro da sociedade, onde tais mudanças tenham ocorrido. Usando o modelo teórico de "futuros coletivos", analisamos se as crenças sobre o futuro da sociedade estão relacionadas com intenções de combate às mudanças climáticas no presente. Participantes de duas amostras imaginaram a sociedade em 2050, onde a mudança climática foi combatida, e avaliaram como essa sociedade diferirá com relação a aspectos sociais de disfunção e desenvolvimento e a traços de personalidade e valores. Na medida em que os brasileiros acreditavam que a prevenção das mudanças climáticas resultariam em desenvolvimento social e mais traços de competência, eles estavam mais dispostos a se envolverem em atividades de cidadania ambiental. As diferenças individuais na perspectiva de tempo futuro também impactaram a intenção de cidadania ambiental. O desenvolvimento societal e a consideração de consequências futuras parecem ser caminhos distintos pelos quais pensamentos sobre o futuro influenciam ações em relação à mudança climática.

Palavras-chave: Mudanças climáticas; pensamento de futuro; cidadania ambiental; futuros coletivos.

RESUMEN

Examinando Cómo las Proyecciones Sobre el Futuro de la Sociedad se Relacionan con las Acciones Actuales de Combate al Cambio Climático

El cambio climático global afectará a todos los ámbitos de las relaciones persona-ambiente. Combatir el cambio climático requerirá cambios sociales que pueden ser motivados por visiones del futuro de la sociedad donde se haya producido dichos cambios sociales. Utilizando el marco teórico de "futuro colectivo", analizamos si las creencias sobre el futuro de la sociedad están relacionadas con intenciones de combatir al cambio climático en el presente. Participantes procedentes de dos muestras brasileñas imaginaron su sociedad en el año 2050 donde se mitigue el cambio climático

y a continuación evaluaron cómo esta sociedad futura podría diferir de la sociedad brasileña actual en términos de disfunción y desarrollo, en el nivel societal, y rasgos de personalidad y valores, en el nivel personal. En la medida en que los participantes creían que la prevención del cambio climático podría resultar en desarrollo societal y más rasgos de competencia, ellos estaban más dispuestos a involucrarse en actividades de ciudadanía ambiental. Las diferencias individuales en perspectiva temporal futura también afectaron en la intención de ciudadanía ambiental. El desarrollo societal y la consideración de las consecuencias futuras parecen ser distintas rutas por las cuales pensamientos sobre el futuro influencian acciones respecto al cambio climático.

Palabras clave: Cambio climático; pensamiento futuro;, ciudadanía ambiental; futuro colectivo.

INTRODUCTION

The extant literature has provided summaries and future visions for environmental psychology at the international arena (Clayton, 2012; Uzzell & Moser, 2009) as well as to more specific contexts such as Latin America (Urbina-Soria & Moyano-Díaz, 2012) and Brazil (Pinheiro, 2003). Despite the diverse methodological and theoretical approaches within the boundaries of environmental psychology research, there is a general purpose that unites the field. As noted by Gifford (2009), this unity of purpose refers to the understanding of "the complex relations between people and the built, natural, and living environments around them" (p. 387).

Climate change is a critical environmental challenge expected to seriously affect all domains in the relations between people and their surroundings (IPCC, 2013). Climate change challenges will thus require societies to transition. To help understand what makes people accept and support these needed transitions, it is important to know what kind of society people want to move towards, and which aspects of these "utopian" images of societies actually promotes action. This is so because in thinking about the future, people's imaginings about what their society could be like are important for shaping social change (Reicher & Hopkins, 2001). As expressed by Chomsky (1970/1999), "Social action must be animated by a vision of a future society, and by explicit judgements of value concerning the character of this future society" (p. 100).

In view of the fact that climate change is one of the most important issues of our time, environmental psychologists as researchers, practitioners, and above all citizens, will need to consider this issue in their professional careers and personal lives. There is a growing literature in the field discussing climate change issues (*e.g.*, Milfont, 2010, 2012; Swim et al., 2011). In the present article we address the climate change challenges facing us all by theoretically arguing that in order to address global climate change we will need to foster not only behavioural change but also social change, and that this change will require future thinking. After the theoretical argumentation we will report an empirical study with two Brazilian samples in which we used the "collective futures" framework (Bain, Hornsey, Bongiorno, Kashima, & Crimston, 2013) to examine whether considerations of the future of society are related to present-day behavioural intentions. This investigation begins with a brief overview of the role of future thinking in fostering pro-environmental actions.

GLOBAL CLIMATE CHANGE AND FUTURE THINKING

Environmental problems can be conceptualised as social dilemmas where individual and collective interests are at odds (Gifford, 2008; Hardin, 1968). For example, driving to work is more rewarding from the perspective of an individual (*e.g.*, saves time, increases comfort) but penalises the broad community in terms of increased traffic, noise and air pollution while public transportation would lead to more positive outcomes to the broad community even if incurring some costs to individuals to a certain degree. Social dilemmas have been traditionally conceptualised only in terms of this intrinsic social conflict (private vs. public interests), but an expanded conceptualisation also takes into account a temporal conflict (short- vs. long-term interests; Joireman, Van Lange, & Van Vugt, 2004). Indeed, research has shown that individuals who care about environmental issues focus more on public and long-term interests than on their own immediate needs and concerns (Milfont & Gouveia, 2006).

The role of temporal aspects in relation to environmental problems is illustrated by studies showing that future-oriented individuals are more prone to engage in pro-environmental actions (for reviews, see Milfont & Demarque, forthcoming; Milfont, Wilson, & Diniz, 2012). Even short-term experimental manipulation asking individuals to envision their future leads to an increase in pro-environmental intention (Arnocky, Milfont, & Nicol,

2014, Study 2). Although this individual standpoint regarding future time perspective is useful in fostering behavioural intention, broad social and environmental issues such as climate change will require large social change. Advancing environmental psychology research on the role of individuals' future time perspective in understanding and fostering pro-environmental action, the present study uses the collective futures framework to examine whether people's projections about how acting on climate change may change society in the future can motivate individuals to take social and political action in the present.

COLLECTIVE FUTURES FRAMEWORK

The collective futures framework (Bain et al., 2013) relates beliefs about the future of society to present-day attitudes and actions (see Figure 1). The model examines whether motivation to take social and political action in the present is related to people's projections about how society may change. The framework distinguishes two main types of projections about society's future. The first type relates to society-wide features, with two dimensions reflecting levels of *societal dysfunction* (*e.g.*, crime and poverty), and levels of *societal development* (*e.g.*, technological advances, economic development). The second type of projections about society's future relates to the character of people who make up society, including their character *traits* (*e.g.*, warm, moral, competent) and their *values* (*e.g.*, equality, pleasure, self-discipline, enjoying life). Empirical support for the framework and the view that people's imaginings of the future drive current behaviour was shown across many domains, from the decline of religion to legalizing marijuana (Bain et al., 2013).
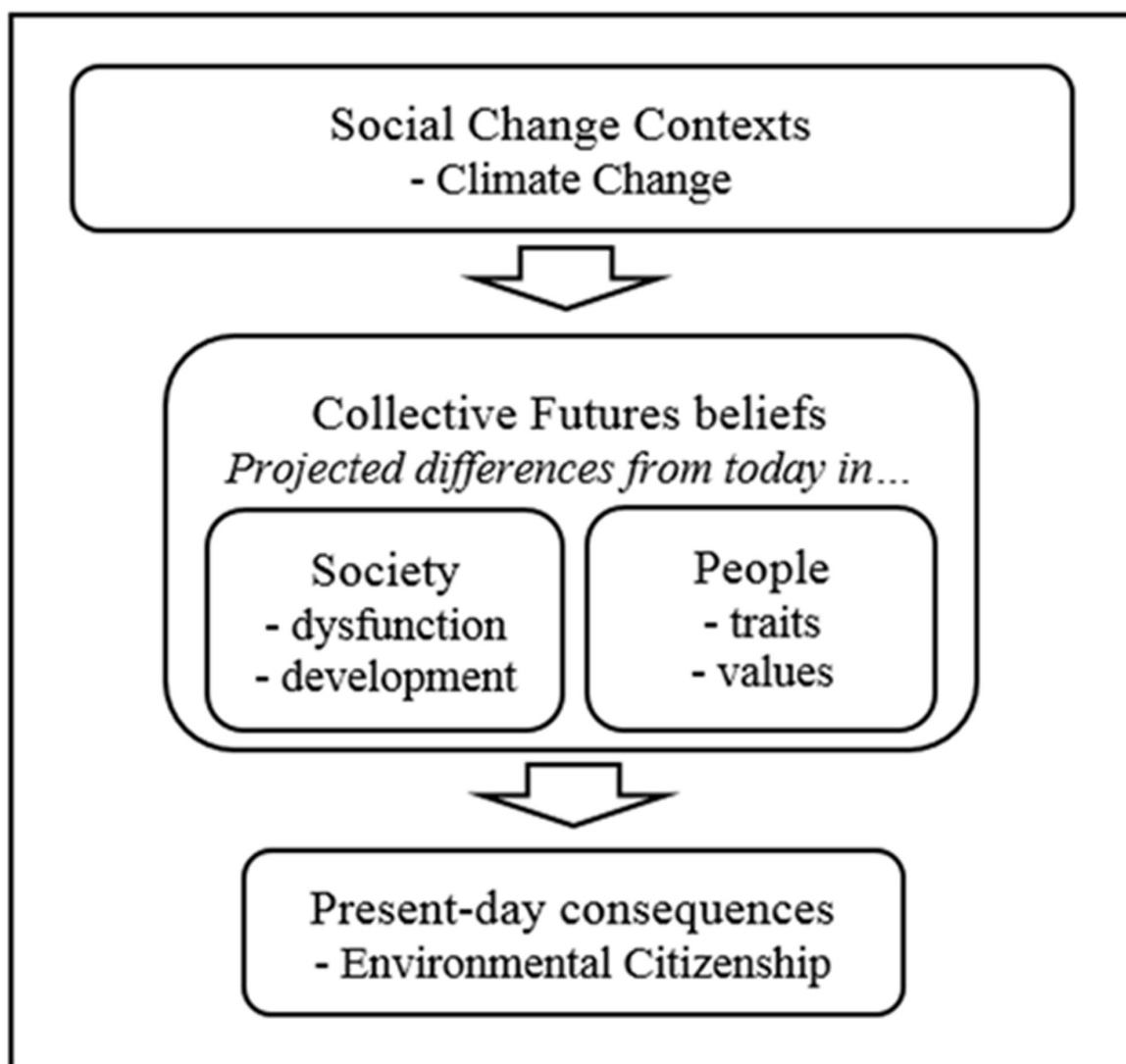

Figure 1. The collective futures framework as applied to climate change.

Importantly, studies focusing on climate change have shown that these projections are associated with pro-environmental intentions for both those convinced and unconvinced about anthropogenic climate change in the USA and Australia (Bain, Hornsey, Bongiorno, & Jeffries, 2012; Bain et al., 2013). In particular, Bain et al. (2013) showed that those convinced that climate change was real were more motivated to act on climate change where they believed mitigating climate change would result in a society where people were kinder and more moral ("benevolence"). Additionally, Bain et al. (2012) showed that even climate skeptics supported action on climate change when they thought taking action would create a society with more benevolent people and would lead to greater societal development.

However, as climate change is a global problem, research in other countries is needed to understand how people's beliefs about the future of society can impact their motivations to act on climate change now. Therefore, the present research replicated and extended this initial research in Brazil.

THE PRESENT STUDY

The present study describes data collected in Brazil as part of the Collective Futures and Climate Change Project. This cross-cultural project examined whether people's projections about what society would be like resulting from climate change action might drive current behavioural intentions. Extending previous research, we also examined whether future time perspective moderates relationships between projections about society's future and present-day action due to the robust associations between future time perspective and pro-environmental intentions (Milfont et al., 2012). In particular, we examined whether there might be stronger associations between societal projections and intentions for people who tend to think more about the long-term consequences of their actions.

Following the collective futures framework (Bain et al., 2013), participants were instructed to think about the future of society in this specific way: "… compare Brazilian society today with Brazilian society in 2050 where people have taken action that has prevented significant climate change." To encourage elaboration, participants were asked to write their initial thoughts about this society. They then completed measures assessing the collective futures dimensions, followed by ratings of behavioural intentions and other measures not discussed in the present article. The English version of the cross-cultural survey was translated into Brazilian Portuguese by a bilingual speaker, and back-translated by a second bilingual speaker.

METHOD

Procedure and Participants

Data from two independent samples (general population and university students) were collected online using Qualtrics survey software. The survey started with a belief question regarding anthropogenic climate change. Data analysed in this article only includes participants who selected the option: "I believe climate change is occurring, and human activities are having significant effects on climate change". Those who did not believe anthropogenic climate change was occurring received a different scenario, and their data are not reported here. Final samples of those participants convinced about anthropogenic climate change included university students ($N=162$; age, $M=25.37$, $SD=6.73$; 68.5% female) and respondents from the general population ($N=180$; age, $M=34.46$, $SD=11.34$; 72.2% female).

Measures

Collective futures dimensions. Projections about the future of society were measured using the collective futures framework (Bain et al., 2013). Table 1 presents all items used for assessing the collective futures dimensions.

One set of ratings assessed participants' perceptions of whether social disorganization and disorder would increase in the Brazilian society they were asked to envision (*societal dysfunction*). In contrast, another set of questions assessed progress and community development (*societal development*). Participants were asked to indicate whether the given aspect would be more or less common in Brazil in the year 2050 using an 11-point scale ranging from -5 (*much less common than in Brazilian society today*) to +5 (*much more common than in Brazilian society today*).

Another set of questions examined whether people's traits and values would change in the envisaged future Brazilian society. First, participants indicated whether Brazilians would be higher or lower in warmth, competence and morality traits in 2050 compared with today. Participants rated each trait on an 11-point scale ranging from -5 (*much less typical than today*) to +5 (*much more typical than today*). Measures of warmth and competence were adapted from the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005), including positive and negative items. Morality items were adapted from an existing scale (Leach, Ellemers, & Barreto, 2007) with the inclusion of negatively framed items to

TABLE 1
Items comprising collective futures dimensions

Society	Traits	Values
Dysfunction	Benevolence	Conservation
Violent crime	Caring	Self-discipline
Poverty	Unfriendly	Family security
Disease	Warm	Respect for tradition
Pollution	Insensitive	Self-Transcendence
Theft	Considerate	Equality
Unemployment levels	Honest	Honesty
Development	Immoral	Social justice
Education levels	Sincere	Openness to Change
Volunteering	Trustworthy	Enjoying life
Economic development	Unethical	Freedom
Scientific progress	Competence	An exciting life
Extend of community groups	Lazy	Self-Enhancement
Extend of parks and natural reserves	Competent	Pleasure
	Unskilled	Wealth
	Capable	Ambitious
	Assertive	

match the original positively valenced items (*e.g.*, honest/immoral). Values were measured using items tapping the four higher order value dimensions of self-transcendence vs. self-enhancement and conservation vs. openness to change proposed by Schwartz (1992). Participants rated whether each value would be more or less important for Brazilians in the year 2050 compared with today on an 11-point scale ranging from -5 (*much less important*) to +5 (*much more important*).

Environmental citizenship. After the collective futures measures, participants were presented with an 11-item measure to assess their intention to engage in environmental citizenship actions, which was the dependent variable in the present study. The items were adapted from an existing scale (Stern, Dietz, Abel, Guagnano & Kalof, 1999) plus newly created items to assess additional and more modern aspects of environmental citizenship. The items used were: 'Give money to an environmental group', 'Read a newsletter, magazine or other publication written by an environmental group', 'Sign a petition in support of protecting the environment', 'Write a letter or call your member of Parliament or another government official to support environmental protection', 'If a local, state or Federal election was called, vote for a candidate at least in part because he or she was in favour of strong environmental protection', 'Write to newspaper in support of protecting the environment', 'Join or renew membership of an environmental group', 'Volunteer to help an environmental group or event', 'Join public

demonstrations or protests supporting environmental protection', 'Post pro-environmental messages or links on social media (*e.g.*, Facebook, Twitter)', and 'Speak in favour of pro-environmental policies in conversations with your friends or family'. Participants indicated how likely they were to engage in each of the activities in the next 12 months on a 5-point scale ranging from 1 (*not at all likely*) to 7 (*very likely*).

Time Perspective. After participants completed the measures of collective futures dimensions and the dependent variable of environmental citizenship, they were then directed to another section of the survey that asked them about individual difference variables including a time perspective measure. The revised 14-item version of the Consideration of Future Consequences (CFC) scale examines the two distinct factors of CFC-Future and CFC-Immediate (Joireman, Shaffer, Balliet, & Strathman, 2012). The CFC-14 measures the extent to which individuals consider and are influenced by future or by immediate consequences of their behaviour. Participants indicated how characteristic each statement was of them on a 7-point scale ranging from 1 (*extremely uncharacteristic*) to 7 (*extremely characteristic*).

RESULTS

Table 2 presents the descriptive statistics and internal consistency of all measures used. All scales showed acceptable reliabilities with the lowest

coefficients for self-enhancement values in the student sample and openness to change values in the general population sample. Inspection of the sample means for the collective futures dimensions indicate that all means were positive and did not statistically differ ($ps > .05$) between university students and respondents from the general population. Comparing the "within-category" dimensions (*e.g.*, societal level dysfunction and development) the results suggest that participants overall believe that societal development would be much more common, that benevolence traits would be much more typical, and that self-transcendence values would become much more important in society in the year 2050 if significant climate change was prevented, compared to Brazilian society today.

Correlations between all measures were then examined, which are reported in Table 3. These basic zero-order correlations indicated a very similar pattern across students and general population samples, but the associations tended to be stronger for university students and some of the correlations were non-statistically significant for the community sample. As expected, all collective futures dimensions were positively associated with environmental citizenship. Among the societal level dimensions of collective futures, societal development had the stronger correlation with intention to engage in environmental citizenship activities. For the personal level dimensions, competence traits and openness to change values had the strongest correlation with environmental citizenship intentions.

TABLE 2
Descriptive statistics of all measures used across samples

Measures	Student				Community			
	N	M	SD	α	N	M	SD	α
1. Societal Dysfunction	162	0.43	2.38	.88	179	0.38	2.48	.88
2. Societal Development	162	2.99	1.44	.81	179	2.62	1.87	.84
3. Benevolence	162	2.15	1.63	.89	179	1.79	1.67	.86
4. Competence	162	2.02	1.53	.68	179	1.76	1.75	.73
5. Conservation	162	2.23	1.83	.68	179	2.05	2.17	.77
6. Self-Transcendence	162	2.52	1.93	.88	179	2.14	2.27	.87
7. Openness to Change	162	1.86	1.85	.69	179	1.70	1.84	.58
8. Self-Enhancement	162	0.89	1.88	.57	179	0.98	2.13	.71
9. CFC-Future	162	3.81	0.51	.70	179	3.75	0.61	.77
10. CFC-Immediate	162	2.14	0.58	.77	179	2.16	0.67	.81
11. Environmental Citizenship	160	3.60	0.84	.89	177	3.42	1.02	.91

TABLE 3
Pearson's correlation coefficients between measures in each sample

Measures	1	2	3	4	5	6	7	8	9	10	11
1. Societal Dysfunction	–	.31***	.08	.10	.07	.15*	.16*	-.05	.02	.05	.15*
2. Societal Development	.46***	–	.57***	.50***	.60***	.63***	.46***	.03	.16***	-.15	.18*
3. Benevolence	.19**	.52***	–	.74***	.63***	.69***	.43***	-.01	.25***	-.26***	.18*
4. Competence	.24***	.51***	.83***	–	.53***	.52***	.34***	-.01	.24***	-.09	.24***
5. Conservation	.33***	.67***	.56***	.54***	–	.77***	.54***	.04	.22**	-.15**	.31***
6. Self-Transcendence	.36***	.63***	.63***	.62***	.80***	–	.47***	-.10	.26***	-.13	.26***
7. Openness to Change	-.07	.16*	.23***	.23***	.36***	.34***	–	.43***	.18*	-.12	.32***
8. Self-Enhancement	-.20**	-.15*	-.04	-.01	-.02	-.05	.65***	–	-.05	-.03	.11
9. CFC-Future	.16*	.28***	.21***	.21***	.18*	.22***	.18*	.03	–	-.48***	.27***
10. CFC-Immediate	-.04	-.14	-.09	-.08	-.03	-.02	.03	.01	-.38***	–	-.24***
11. Environmental Citizenship	.02	.20**	.13	.14	.17*	.16*	.22***	.20**	.22***	-.14	–

Note: Correlations above diagonal for student sample and below diagonal for community sample. CFC = Consideration of Future Consequences Scale.
* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed).

Similar to the associations observed for the collective futures dimensions, future time perspective was also positively correlated to environmental citizenship intentions as well as positively correlated to all collective futures dimensions. In contrast, immediate time perspective was negatively correlated to environmental citizenship intentions and all collective futures dimensions. Future and immediate time perspective were negatively and only moderately correlated ($r < .50$), which support their theoretical and empirical distinction.

Complementing these analyses, we conducted regression analyses to control for other "within-category" dimensions in order to establish independent effects. That is, we examined the association between societal dysfunction and environmental citizenship after controlling for societal development, the association for benevolence after controlling for competence, and for conservation values or any other high order value cluster after controlling for other values. Table 4 present the results of these regressions.

As can be seen, a clear pattern emerged across samples. When comparing within-categories dimensions for both university students and citizens from the general population, societal development and competence are the core collective futures dimensions influencing environmental citizenship. Overall, Brazilians are more willing to engage in environmental citizenship activities to the extent that they think preventing climate change would result in a future society where there is societal development and people were more competent. Distinctions emerged for values with openness to change values exerting stronger influence on environmental citizenship for students, while self-enhancement exerted the strongest influence for the community sample.

Table 4 also shows that, overall and across both student and community samples, there were significant associations with environmental citizenship for societal development (especially for the community sample), and for CFC-Future. We then examined whether future time perspective moderated the association between societal development and environmental citizenship. In other words, the influence of societal development on environmental citizenship could be enhanced for those who place greater emphasis on the future consequences of their actions. We ran moderated multiple regressions following procedures outlined by Aiken and West (1991). Societal development and CFC-Future were entered at Step 1 and their interaction term at Step 2. The interaction term was not significant in either sample ($ps > .30$) suggesting that societal development and CFC-Future influence environmental citizenship independently.

TABLE 4
Multiple regression results predicting environmental citizenship

IV	Students			Community		
	β	t	p	β	t	p
1. Societal Dysfunction	.110	1.343	.181	-.089	-1.067	.287
2. Societal Development	.151	1.844	.067	.246	2.943	.004
	$R^2 = .05$, $R^2_{Adjusted} = .03$ $F(2, 157) = 3.71$, $p = .03$			$R^2 = .05$, $R^2_{Adjusted} = .04$ $F(2, 173) = 4.38$, $p = .01$		
3. Benevolence	-.002	-.013	.989	.063	.463	.644
4. Competence	.243	2.104	.037	.085	.623	.534
	$R^2 = .06$, $R^2_{Adjusted} = .05$ $F(2, 157) = 4.88$, $p = .01$			$R^2 = .02$, $R^2_{Adjusted} = .01$ $F(2, 173) = 1.80$, $p = .17$		
5. Conservation	.178	1.420	.158	.086	.682	.496
6. Self-Transcendence	.034	.271	.787	.088	.698	.486
7. Openness to Change	.192	1.828	.069	.048	.422	.674
8. Self-Enhancement	.027	.298	.766	.179	1.702	.090
	$R^2 = .13$, $R^2_{Adjusted} = .11$ $F(4, 155) = 5.71$, $p < .001$			$R^2 = .08$, $R^2_{Adjusted} = .06$ $F(4, 171) = 3.53$, $p = .01$		
9. CFC-Future	.196	2.261	.025	.199	2.491	.014
10. CFC-Immediate	-.149	-1.717	.088	-.070	-.871	.385
	$R^2 = .09$, $R^2_{Adjusted} = .08$ $F(2, 157) = 7.61$, $p = .001$			$R^2 = .06$, $R^2_{Adjusted} = .04$ $F(2, 173) = 5.06$, $p = .01$		

CFC = Consideration of Future Consequences Scale.

DISCUSSION

Climate change remains one of the most important issues of our time, and is thus a pressing challenging that environmental psychologists must face as researchers, practitioners and citizens. Social change is necessary in order to address climate change, and projections of the future might be inspirational and serve as a powerful tool in guiding collective action in this direction. Projections about the future of society are important because we need to be able to imagine a different reality in order to make changes to present circumstances, and then we need to believe that that different reality is possible.

In the present study we examined this matter by focusing on whether people's visions of society's future can influence environmental citizenship across university students as well as respondents from the general population in Brazil. Drawing from the collective futures framework (Bain et al., 2013), participants were first asked to image a future where people have taken action that has prevented significant climate change, and then asked to rate how this envisioned future would differ from the present in terms of societal dysfunction and development and characteristics of the population in terms of traits and values. Notably, we examined which of these dimensions of change were related to willingness to engage in environmental citizenship activities in the present.

The findings suggest that projected change in societal development and competence are the active ingredients in influencing environmental citizenship for Brazilians in the present. To the extent that participants believed preventing significant climate change would result in a future where there is societal development in Brazilian society and Brazilians would have more competence traits (*e.g.*, competent, capable), they were more willing to engage in environmental citizenship activities such as given money to an environmental group, sign a petition in support of protecting the environment, and volunteer to help an environmental group or event.

Zero-order correlations showed that projected change in openness to change values was more strongly correlated to environmental citizenship intentions for both samples. At the same time, regression results controlling for the other values showed that the associations differ across samples. Projected change in openness to change values was more predictive of environmental citizenship intentions for university students, while projected change in self-enhancement values was more predictive of environmental citizenship

intentions for the community sample. This suggests that projected change in values might reflect specific value functions for different groups, a perspective that seems coherent with the functional theory of values (Gouveia, Milfont, & Guerra, 2014).

Among the collective futures dimensions, projected change in societal development had the strongest effect. Participants believed that a future where climate change has been prevented would result in substantial development in Brazilian society compared to the present, including higher education levels, economic development and scientific progress. It may be that Brazilians were more influenced by scientific and technological advancement due to the economic development scenario of the country. Brazil is recognized around the world as an emerging nation member of the BRICS, which is a group of countries with growing economy. By living in a developing country with a growing economy, Brazilians might consider social development as the most pressing aspect to consider in a vision of a future society where people have taken action that has prevented significant climate change.

Besides the observed effects for particular collective futures dimensions, and in particular the role of societal development, future time perspective was also related to environmental citizenship (see Table 3). Intentions to engage in environmental citizenship activities were greater for those who had a stronger consideration of the future consequences of their actions. This finding provides additional empirical support for the role of future thinking and consideration of future consequences in fostering pro-environmental engagement (*e.g.*, Arnocky et al., 2014; Milfont et al., 2012).

Our findings also showed that both projected change in societal development and future time perspective have additive effects on environmental citizenship, but they do not interact. This suggests two distinct routes by which future thinking might influence action in the present – at least in the environmental domain. At a lower level, individual differences in future time perspective might make individuals engage in pro-environmental action by reducing temporal distance between the now and what comes next. In fact, psychological research has shown that reduced psychological distance might lead to an increase in environmental engagement (Evans, Milfont, & Lawrence, 2014) and climate change beliefs (Milfont, Evans, Sibley, Ries, & Cunningham, 2014). At a higher level, images of the future of society motivate action in the present by providing hopes and aspirations (even if utopian) on how current pro-environmental

actions might positively affect society in the years to come. This dual route of future thinking influencing present day pro-environmental action seems related to a recent distinction between personal and social future time perspectives made by Morselli (2013). Moreover, both of these routes of future thinking influence on present day action seem related to intergenerational decision-making or environmental generativity (Milfont, & Sibley, 2011), in which individuals consider the welfare of future generations and their offspring. Broadly speaking, mental time travel into our future can be critical to our survival (Suddendorf, 2006).

We believe the present study provides some implications for environmental psychology in general and for this field in Brazil. First, this study provides empirical support for the role of future thinking in fostering environmental engagement. Previous findings have shown that individual-level future thinking is important in fostering environmental engagement, and the collective futures framework shows that societal-level future thinking is also relevant in dealing with climate change. Another implication refers to the contextual characteristics of Brazilian society for dealing with climate change. It seems that environmental psychologists in Brazil can help foster climate change mitigation and adaptation by making salient the benefits of societal development and uptake of competence traits. It seems that the motto of "Order and Progress" in the Brazilian flag could also serve as an inspirational tool for tackling climate change. Here we showed that projected change in progress (as translated by societal development and competence traits) for society's future leads to an increase in behavioural intentions to engage in environmental citizenship activities. Order would also be beneficial in achieving (or as a consequence of) projected changes in progress. Future qualitative and quantitative research could examine the extent to which this could be a viable approach.

In conclusion, we posit that global climate change is perhaps the main challenge environmental psychologists need to help address. Our empirical work supports previous findings indicating that future thinking, and in particular individual differences in future time perspective, is an important avenue for fostering mitigation behaviours. We also advance previous theorising by showing that besides this more individual-level future thinking, people's projection about the future of their society is also related to their willingness to take action today. The collective futures framework is a relevant theoretical and empirical tool in understanding and fostering inspiration for a better future. This framework could also be used in combination with other future thinking methodologies that have been applied to create visions of different sustainable futures, such as back-casting scenarios (Dumitru & García-Mira, 2012). We believe these are interesting avenues for future research.

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