

# Individualism, Structuralism, and Climate Change

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## Abstract

Scholars and activists working on climate change often distinguish between “individual” and “structural” approaches to decarbonization. The former concern behaviors and consumption choices individual citizens can make to reduce their “personal carbon footprint” (e.g., eating less meat). The latter concern institutions that shape collective action, focusing instead on state and national laws, industrial policies, and international treaties. While the distinction between individualism and structuralism—the latter of which we take to include “institutional”, “systemic”, and “collectivist” approaches—is intuitive and ubiquitous, the two approaches are often portrayed as oppositional, as if one or the other is the superior route to decarbonization. We argue instead for a more symbiotic conception of structural and individual reform.

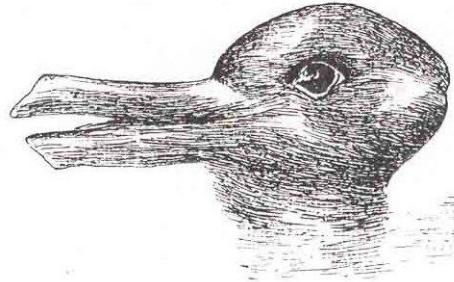
## 1. Introduction

Scholars and activists working on climate change often distinguish between “individual” and “structural” approaches to decarbonization. The former concern behaviors and consumption choices individual citizens can make to reduce their “personal carbon footprint” (e.g., eating less meat). The latter concern institutions that shape collective action, focusing instead on state and national laws, industrial policies, and international treaties. While the distinction between individualism and structuralism—the latter of which we take to include “institutional”, “systemic”, and “collectivist” approaches—is intuitive and ubiquitous, the two approaches are often portrayed as oppositional, as if one or the other is the superior route to decarbonization.

We argue instead for a more symbiotic conception of structural and individual reform.<sup>1,2,3,4,5,6,7,8</sup> For every structural reform to prioritize, there are certain individual reforms to prioritize *because* they contribute to that structural reform. And for each individual reform to prioritize, there are particular structural reforms to put in place because they enable individuals to make the prescribed behavioral changes. A symbiotic conception of structural and individual reform ultimately promotes a “both/and” approach to meeting the climate crisis. Instead of debating whether to focus *either* on lifestyle and consumer change *or* corporate and policy change, advocates should instead think in terms of “both/and” packages of changes. These will identify which *specific* individual-level changes in lifestyle, consumption, and activism best complement those *specific* structural transformations to economies and political systems that will combat climate change, and

42 vice versa. Individuals and structures are interdependent and mutually supporting; strategic changes  
43 to both are necessary.

44 A helpful metaphor for thinking about this interrelation is the famous duck-rabbit illusion.  
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48 People see either a duck or a rabbit but not both at the same time; bringing one to attention  
49 inevitably forces the other into the background. But those features of the picture relegated to  
50 background remain, and remain essential to its composition. While we can only see the duck or the  
51 rabbit at a single time, the image itself is a product of the relations between all of its elements,  
52 regardless of which ones we attend to.

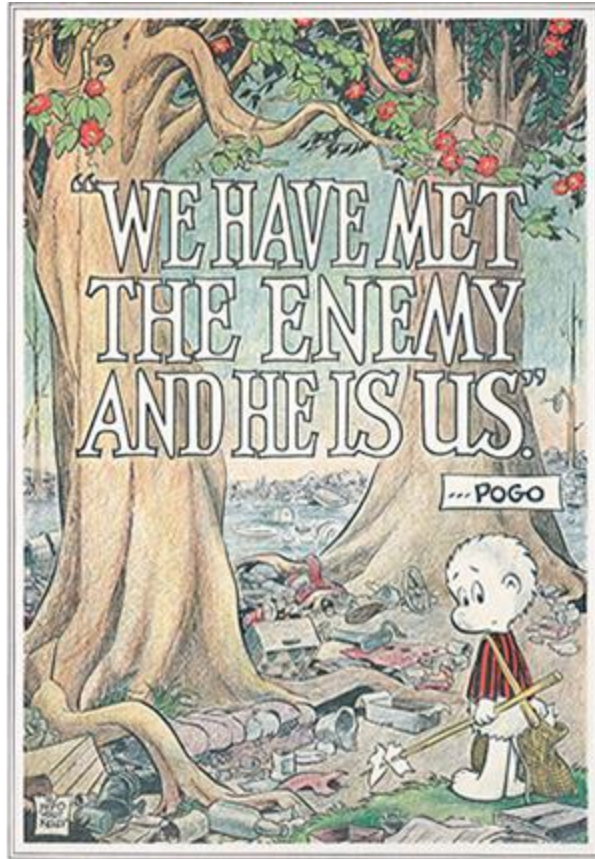
53 Likewise, while different members of the climate community focus on how different  
54 elements of society affect the climate, it is as fruitless to debate the primacy of individuals or  
55 structures as it is to debate whether the image is *really* a duck or a rabbit. Consequently, the most  
56 effective strategies for change will target *both*, and we thus call for research identifying both/and  
57 packages of structurally-oriented and individually-oriented interventions that have the greatest  
58 potential to maximize decarbonizing outcomes.

59

## 60 **2. Individualism and Structuralism in Climate Politics and Activism**

61 The dispute between individualists and structuralists is not a single disagreement but a family  
62 of thematically related debates. These include social scientific debates about the relative influence of  
63 individual agency versus structural factors in driving historical change,<sup>9</sup> political debates pitting  
64 libertarians and liberal individualists against socialists and communitarians,<sup>10,11</sup> and methodological  
65 debates about suitable explanations of social behavior.<sup>12,13,14,15</sup> Concepts and assumptions from these  
66 literatures inform two long-standing streams of research and activism on environmental protection,  
67 sustainability, and decarbonization.

68 “Individualism” is perhaps most recognizable as a founding ethos of the modern  
69 environmental movement, as captured by an anti-pollution Earth Day [poster](#) from 1970:  
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73 It suggests that wasteful lifestyle choices are the cause of environmental degradation, and implies a  
74 solution: individuals can be better personal stewards of the earth, by recycling, avoiding littering, etc.

75 Several influential lines of research which are commonly construed as individualist aim to  
76 promote stewardship of this kind as a remedy for climate change. One aims to identify drivers of  
77 pro-climate action by isolating key variables within individuals, such as their beliefs about climate  
78 change,<sup>16</sup> political attitudes,<sup>17</sup> personality traits,<sup>18</sup> and moral frameworks.<sup>19</sup> A complementary  
79 literature measures the aggregative effects of the personal choices that these variables are thought to  
80 explain. For example, Wynes and Nicholas<sup>20</sup> ranked 148 lifestyle choices to determine the most  
81 impactful ways to reduce one's personal "carbon footprint." Their analysis suggests that the four  
82 most impactful things individuals can do is have one fewer child, live car-free, fly less, and adopt a  
83 plant-based diet. A set of philosophical questions—also commonly construed as individualist—  
84 focus on whether people are morally obliged to adopt such practices.<sup>21,22,23,24</sup> Other philosophers  
85 have examined environmental morality through the lens of virtues and vices: Jamieson<sup>25</sup> argues that  
86 individuals must cultivate virtues like humility, mindfulness, and temperance in the era of  
87 anthropogenic climate change, while Hourdequin<sup>22</sup> considers moral hypocrisy by asking whether one  
88 can be genuinely concerned about climate change while driving an inefficient car for pleasure.

89 Research commonly construed as "structuralist" often holds these individual-difference  
90 variables constant while aiming to identify drivers of climate-related outcomes exogenous to  
91 individuals, such as government type,<sup>26</sup> industrial arrangements,<sup>27</sup> policy design and costs,<sup>28</sup> cues

92 from political elites,<sup>29</sup> and regional wealth.<sup>30</sup> Interventions designed to create changes in these  
93 domains are broadly aimed at manipulating institutions, understood as the “rules of the road” that  
94 shape individuals’ decisions and behaviors.<sup>31</sup> The idea that climate change is a collective action  
95 problem, such that international treaties are required to combat it, is similarly structuralist in spirit, as  
96 are calls for ending global capitalism or limiting population growth. Proponents hold that these  
97 proposals address the social structures within which individual agency is exercised. Explicit  
98 invocations of structuralism, however, often manifest as dismissals of the individualist ethos, for  
99 example, by pointing out that concepts like “litterbug” and “personal carbon footprint” were created  
100 by industrial polluters. These explicit invocations are found both in academic research<sup>32,33,34,35</sup> as well  
101 as in popular essays whose titles highlight their antagonism, such as “You Can’t Save the Climate by  
102 Going Vegan”<sup>36</sup> and “I Work in the Environmental Movement. I Don’t Care if You Recycle.”<sup>37</sup>

103

### 104 **3. Oppositional Thinking**

105       There are several problems with thinking of these streams of research as oppositional.

106

#### 107 **3.1 The Duck-Rabbit Problem of Social Behavior**

108 Consider a few concrete cases:

109

110       *E-Scooters:* Italy is awarding 500€ grants to city-dwellers who purchase bicycles or e-scooters.  
111 Is this a structuralist reform, because it is a nationwide public policy, or is this an  
112 individualist reform, because it aims to encourage individual citizens to reduce their carbon  
113 footprint by reducing their personal use of automobiles?

114

115       *Phone banking:* You volunteer with an organization to make phone calls to persuade voters in  
116 your town to vote for political representatives who support a “Green New Deal.” Is phone-  
117 banking an individualist reform, because individuals try to persuade other individuals one-by-  
118 one? Or is phone-banking a structuralist reform, part of a collective action movement  
119 seeking to change political behavior (e.g. voting for a policy to fundamentally restructure the  
120 American economy)?

121

122       *Solar Panels:* Choices made by homeowners to install solar panels shape and are shaped by  
123 their neighbors’ choices.<sup>38</sup> Peer pressure is demonstrably powerful.<sup>39</sup> Is a county program  
124 publicizing local solar installations in order to increase uptake of residential rooftop solar an  
125 individualist reform, because it targets people as consumers, or a structuralist reform,  
126 because it motivates action by changing their perceptions of their social world?

127

128       *COVID-19:* The economic slowdown caused by the coronavirus pandemic is on track to  
129 reduce global emission between an estimated 2% to 7% in 2020 as compared to 2019.<sup>40</sup> This  
130 would be the largest single year drop off in modern history. Is this a vindication of  
131 individualism, because it demonstrates the enormous changes people can make if they  
132 choose to? Or is it a vindication of structuralism, because these individual changes resulted

133 from a profound “shock to the system” and emergency, top-down, state-based policy  
134 changes?

135  
136 We take these to be rhetorical questions, analogous to “is it a duck or a rabbit?” They show  
137 how *the very same phenomenon* can be plausibly interpreted as vindicating either individualism or  
138 structuralism. Efforts to create social change can be construed primarily in terms of individuals’  
139 traits, attitudes, and habits or primarily in terms of shared institutions, laws, and economies. As with  
140 the duck-rabbit, it is difficult to “see” both at the same time. The source of this difficulty, too, is in  
141 us. It reflects the limitations of our current conceptual tools.

### 142 143 **3.2 Theoretical Generalities and Empirical Particulars**

144 Oppositional thinking about individuals and social structures takes many forms, including the ideas  
145 that individual consumer choices cannot make a material difference to atmospheric GHG  
146 concentrations; that asking ordinary people to make sacrifices to reduce their carbon footprint  
147 unjustly puts the onus on victims to solve a problem that they did not create; and that  
148 preoccupations with individual action, culpability, and purity distract from more effective structural  
149 interventions.<sup>36,37,41,42</sup>

150 These points are not wrong, but they are often wrongly understood. They do not  
151 demonstrate the superiority of structural reform, but rather, the importance of the relations between  
152 individuals’ choices and the laws, policies, and norms that govern their social environments.  
153 Certainly, some individual choices are ineffectual. This suggests these are the wrong individual  
154 choices to make. It does not suggest the wrongheadedness of changing individual behavior as such.  
155 If—and we stress that these are empirical questions—calling for individuals to go vegan and car-free  
156 are the wrong individual changes to focus on, there will necessarily be *other* individual changes to  
157 focus on, namely, whichever changes best promote needed structural reforms (e.g., phone-banking  
158 for pro-climate political candidates). We suspect that many scholars who emphasize the superiority  
159 of structural approaches to reform recognize the importance of specific individual actions, especially  
160 voting and other political activity. Despite this, many still derogate the value of individual action in  
161 general. We call for more fine-grained focus on *which* individual actions are valuable in virtue of their  
162 relations to structural change. Table 1 summarizes oppositional and symbiotic thinking about  
163 questions like these.

### 164 165 **3.3 Cognitive Biases**

166 The refrain that “structural problems require structural solutions” expresses the thought that  
167 effective solutions must be as deep, broad, and durable as their corresponding problem. This idea is  
168 familiar and intuitive, but may be misleading. For example, a common source of systematic error in  
169 causal reasoning is the belief that causes resemble their effects in size and quality.<sup>43</sup> For example, if  
170 told of a person who loses their job—a significant consequence—because their computer crashes,  
171 people will infer a “matching” cause, such as a widespread computer virus. If told of another  
172 computer crash that yields no significant consequences—no job loss—people will infer a “smaller”  
173 cause, such as a malfunctioning cooling fan.<sup>44</sup> This “consequence-cause matching” bias may lend

174 unearned credibility to the thought that individual action is causally insignificant in combatting  
175 climate change as well.

176         Metaphors of size can also imbue “structural” with connotations of “big,” inviting other  
177 errors in reasoning. It is sometimes implied that what makes an intervention “structural” is that it is  
178 expected to have a large impact. This renders structuralism uninteresting, if not outright empty. That  
179 scholars and activists should pursue structural change rather than individual change is hardly  
180 controversial if structural change is simply defined as that which has the biggest impact. Moreover,  
181 proposals touted as “large-scale,” “deep,” or “durable” can seem persuasive because they resonate  
182 with entrenched masculinist or patriarchal ideology, even if they are unsupported by any good  
183 arguments or evidence.<sup>45</sup> Just like the old advertisement equating meat-eating with maleness (“Real  
184 Men Eat Beef”), suggesting that the “real solutions” to climate change are structural can seem  
185 plausible because it implicitly activates distorting stereotypes. Finally, “big” is vague; it remains  
186 unclear what exactly qualifies a policy as big and structural. Such vagueness allows interpretive bias  
187 to proliferate: Are municipal energy-efficiency regulations structural? How about such regulations in  
188 a small town? When Walmart switched to LED lightbulbs, was that a structural change? We suspect  
189 intuitions about this question might be driven by people’s attitudes toward Walmart just as much as  
190 by their beliefs about the definition of structural change.

191

### 192 **3.4 Zero Sum Thinking**

193         Oppositional thinking presents individuals’ time and resources for addressing climate change as  
194 zero-sum, as if, for example, recycling comes at the expensive of more causally effective strategies,  
195 such as holding extractive industries accountable for pollution. But this is misguided. For example,  
196 the view that efforts to change consumer behavior distract from more important structural changes  
197 presupposes that the former *substitute* for the later. Evidence suggests this may be false, and that  
198 relationship is actually often *complementary*. For example, individuals who reflect on sustainable  
199 individual behavior become more rather than less likely to support structurally-oriented action, such  
200 as policy change.<sup>46</sup> A plausible hypothesis explaining this is that people often want to be consistent  
201 across the spheres of their personal activity.<sup>47</sup> There are many open empirical questions here, and  
202 it remains unclear in what contexts “green” consumer behavior complements or substitutes for  
203 political behavior in other domains (e.g., does going car-free cause people to take fewer or more  
204 pro-climate political actions)?<sup>48</sup> But “substitutability” should not be the default assumption, and  
205 indeed, lifestyle choices are strong predictors of taking political action for the climate.<sup>49,50,51</sup>

206         Given the scarcity of time and energy, the most important question is not *whether* to pursue  
207 individual or structural change, but *which* governmental, economic, and social structures we ought to  
208 change, and *what concrete roles* individuals must play to change them. There is, of course, extensive  
209 research analyzing comparative packages of structural reform. But it is a mistake to portray these as  
210 somehow representing alternative strategies to those aimed at influencing the decisions and behavior  
211 of individuals.

212         Both “camps” in the debate are partly right and partly wrong. Each is correct in thinking  
213 their favored form of change is indispensable. But they are incorrect to think that either claim to  
214 indispensability is *incompatible* with the other. Indeed, both forms of change are not just compatible,

215 both are *essential*. All interventions to create social change include both individual and structural  
216 components, and the individual and structural aspects every intervention are interdependent.  
217 Consequently, so-called structural reforms always require individuals to support and implement  
218 them, while individual choices are always shaped by social structures, which themselves change  
219 when individuals direct their agency towards changing them. We thus do not deny the existence of  
220 either individuals or structures, or the usefulness of the distinction between them. Rather, we object  
221 to construing these categories as antithetical competitors. Doing so generates confusion and discord,  
222 thwarts theoretical collaboration, and acts as an obstacle to the development of a richer, more  
223 synthetic strategic imagination for guiding social change.

224

#### 225 **4. Symbiotic Thinking**

226 More work on how to best exploit the mutually reinforcing effects of individually-oriented  
227 and structurally-oriented actions is needed. However, several lines of current research have made  
228 promising inroads, and can be built upon to develop symbiotic approaches for addressing the most  
229 pressing questions for the climate movement.

230

#### 231 **4.1 Individual Elements of Structural Change and Structural Elements of Individual Change**

232 How can voters be mobilized to support pro-climate public policies?

233 Consider carbon taxes, a much-discussed approach to emissions-reduction that is  
234 quintessentially “structural” (though not uncontroversial<sup>52</sup>). Carbon taxes aim to slow GHG  
235 emissions indirectly by manipulating the basic levers and incentives underlying economic activity. In  
236 principle, they can work even if almost nobody changes their mind about climate change or makes  
237 an intentional decision to reduce their carbon footprint. Rather, emissions will decline simply  
238 because the price of producing them increases.

239 But passing carbon taxes is politically challenging.<sup>53</sup> Debate over them activates partisanship,  
240 identity processes, and economic anxiety. As with most policies, persuading the public to support  
241 taxing carbon requires contending with the ways in which individual citizens think about the issues  
242 involved. Research in this vein should continue exploring the political psychology relevant to the  
243 distributional challenges carbon taxes create.<sup>54,55,56</sup> Should all citizens receive equal carbon dividends,  
244 or should those most impacted by climate change receive the most? Should the money be spent on  
245 climate change mitigation? How much, if at all, should citizens be told they need to sacrifice, given  
246 the possibility of backlash once a policy is implemented?<sup>57</sup> Answering these questions and  
247 overcoming the obstacles to passing carbon taxes requires a both/and approach: evaluating an  
248 ostensibly structural reform—the tax-and-dividend scheme—in a paradigmatically individualist way  
249 by considering how individuals think and feel about equity and desert, especially in light of their  
250 political and social identities.

251 A similar lesson holds in the other direction, as those advocating for putatively individualist  
252 reforms should take a both/and approach by thinking of individuals in paradigmatically structuralist  
253 ways.<sup>5</sup> Carbon taxes have failed when fossil fuel companies and other opponents have funded  
254 massive lobbying and disinformation campaigns.<sup>27</sup> These campaigns shape how individuals—both  
255 voters and, notably, politicians—think about the relevant policies. Lobbying that changes the

256 attitudes of individual citizens thereby changes the incentive structures that shape the behavior of  
257 politicians, thus shifting the structural context in which politicians operate. In that newly induced  
258 context, resisting carbon taxes can help them win re-election, while endorsing carbon taxes can lead  
259 donors to fund a rival candidate, etc.

260 The example of changing incentivizes for politicians also illustrates how thinking of  
261 individuals in structuralist terms requires a shift from generic, untargeted efforts to persuade via  
262 appeals to scientific evidence or moral argument—efforts to make arguments that “should”  
263 persuade everybody, but target nobody in particular. Instead, attempts to motivate individuals  
264 should attend to the specific roles, constraints, and incentives that individuals face by virtue of  
265 occupying a given organizational position. For example, efforts to persuade CEOs, elected officials,  
266 and other institutional leaders to support pro-climate policies requires attending to their respective  
267 sets of constraints and incentives, which in turn depend on their stakeholders, consumers,  
268 constituents, and so on (see §4.5).<sup>58</sup>

269 More generally, changes in social institutions and structures reliably lead to changes in  
270 people’s minds. Individuals’ voting and consumer choices are shaped by social forces that make each  
271 alternative attractive or distasteful, easy or difficult, efficient or inefficient, etc. Thus, while it is true  
272 that enacting a structurally-oriented reform like a carbon tax requires thinking in an individualist  
273 way, it is equally true that persuading individuals to support the right reforms requires thinking of  
274 their options in a structuralist way. Research on how corporations, laws, media organizations, and  
275 culture promulgate the architectures of choice for individuals is thus crucial to building better  
276 symbiotic approaches to decarbonization.

277

## 278 **4.2 Social Signaling and Social Norms**

279 How can information about climate change be effectively disseminated to motivate action?

280 While a strong majority of Americans believe in the science of climate change, too few  
281 understand the consequences of unabated warming.<sup>16</sup> Likewise, political representatives tend to be  
282 both uninformed about their constituents’ beliefs about climate change<sup>59</sup> and are skeptical that those  
283 beliefs translate into tangible action.<sup>60</sup> Better information dissemination is needed.

284 Social norms likely have a key role to play here. Norms are the often-unwritten rules that  
285 govern social life.<sup>61,62,63,64</sup> They are both “in the head” of individuals and elements of social  
286 structures. On the one hand, individuals’ decisions are shaped by the norms they internalize from  
287 their community. On the other, the social norms prevalent in a community are kept in place by  
288 individuals’ shared expectations and common practices. These rules—which are the product of  
289 interaction between individuals and social structures—are not explicit policies or formal institutions.  
290 They are “soft structures”<sup>64</sup> that provide information about what other people do and what other  
291 people think one ought to do.<sup>65,66</sup> Social norms can therefore be leveraged to disseminate climate-  
292 related information in motivationally effective and durable ways.

293 Consider whether to go car-free. One way to evaluate the impact of this choice is to estimate  
294 its reduction on one’s personal carbon footprint (2.4 tons of CO<sub>2</sub>-equivalent emissions per person  
295 per year<sup>20</sup>). Another is to estimate the signals one sends by walking, bicycling, and telling one’s  
296 friends, family, and co-workers about this choice, helping to create a different set of social



297 expectations in the community. Individual choices have material externalities, but they also perform  
298 measurable signaling functions, changing perceptions of what is normal and appropriate.<sup>3,38</sup>  
299 Individual actions can signal values to elite decision-makers as well as other citizens. Governments  
300 and businesses may resist change so long as they perceive people to be merely talking about a crisis  
301 but going about their business as usual.<sup>67</sup>

302 Taking this research program further requires addressing a series of empirical questions  
303 about the interaction of individuals and social structures. These questions include how much  
304 “broadcasting” power individuals have, which in turn requires exploring individual differences in  
305 geographic location (city residents who may not drive versus suburban residents who do). A given  
306 person’s social location is also key, as prestigious individuals, for example, have disproportionate  
307 power to transmit normative information.<sup>68</sup> They can serve, in other words, as “social referents,”  
308 people from whom others learn normative information.<sup>69</sup> Visible sacrifices made by these individuals  
309 will likely have larger effects on others than “easy” choices.<sup>67</sup> Proponents of structural change  
310 themselves, in particular, may be perceived as hypocritical if they don’t signal their commitment to  
311 change through personal pro-climate choices.<sup>70</sup>

312

### 313 **4.3 Ease-Impact Tradeoff**

314 How should researchers think about the comparative “bang for the buck” of more structurally-  
315 oriented interventions compared to more individually-oriented interventions?

316 All else equal, easier-to-implement reforms are likely to have less impact, whereas harder-to-  
317 implement reforms are likely to have more. Buying carbon offsets is easy but unlikely to change the  
318 course of global events; an enforceable international treaty to curb emissions would be tremendously  
319 influential, but is dauntingly complex and likely to be met with opposition. This is a general heuristic,  
320 and so not without exceptions. Still, the goal ought to be the proper calibration of effort invested to  
321 expected outcome. The worst interventions will be those that drain attention and resources yet do  
322 not end up making a difference, while the best will be those that are both achievable and impactful.

323 Taking the Ease-Impact Tradeoff seriously requires attending to key variables that reflect the  
324 symbiotic nature of individual and structural reform, such as:

325

326 *Feasibility*: what is possible for individuals who occupy different social positions to do given  
327 current political, economic, and cultural constraints?<sup>2,3,5</sup> How demanding is a given  
328 intervention of the relevant individuals, given the “choice set” of their social environment?  
329 Meanwhile, which public policies and legal frameworks are leaders emboldened to reform,  
330 given the opinion and mood of the electorate at a specific point in time, the expected role of  
331 interest groups, and so on?

332

333 *Advisability*: what is the potential for an individual pro-climate choice to “catch on” with  
334 others rather than decrease the likelihood that they act similarly, particularly in politicized  
335 cultures where climate-related behavior signals partisan identity? Similarly in the domain of  
336 public policy, what are the chances for long term durability rather than backfire or further

337 politicization? Will the intervention risk unintended consequences? How dangerous might  
338 those consequences be?

339  
340 *Knowability*: how predictable are the effects of pro-climate individual choices and social-  
341 structural policy-changes? For example, what key variables determine when consumer  
342 choices reach tipping points that render them collectively consequential for reducing system-  
343 wide decarbonization?<sup>71</sup> Similarly, have proposed decarbonization policies been tried before  
344 under similar institutional, political, and cultural circumstances? If so, are the results  
345 generalizable?

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347

#### 348 **4.4 Initiating Roles and Sustaining Roles**

349 How can the climate community more effectively let people know what *they* can do, as individuals, to  
350 help fight climate change?

351 Oppositional thinking can create a motivational morass if individualist-oriented advice—  
352 flying less often, eating less meat—is seen as doable but ineffectual, while structuralist-oriented  
353 advice—create “structural change”—can sound vague and unachievable. A symbiotic alternative is  
354 to direct individuals to the variety of social roles they can play to create and sustain structural  
355 change.

356 Different individuals will have different *initiating* roles available to them based on their social  
357 positions. Scientists, for example, can help initiate change by gathering data relevant to assessing  
358 interventions (they can also choose between various initiating roles, such as being a pure scientist,  
359 science arbiter, issue advocate, or honest broker<sup>72</sup>); corporate leaders and employees can initiate  
360 change by talking about and seizing opportunities to tie innovation to decarbonization; lawmakers  
361 can initiate change by articulating reasons in favor of their preferred policies; columnists and pundits  
362 can disseminate and contextualize those plans and the research on which it stands; organizers and  
363 activist groups can mobilize support for them; marketers, advertisers, and artists can make them  
364 appealing; citizens need to vote for them. Within each of these roles are additional sets of roles, too.

365 *Sustaining roles* are filled by individuals who want to help protect and entrench progress  
366 already made. They are crucial for ensuring the long-term efficacy of short-term gains, which in turn  
367 can become self-reinforcing as policy changes stimulate changes in beliefs and norms.<sup>73</sup> Sustaining  
368 roles involve guiding the social policies and laws through the “fog of enactment,”<sup>74</sup> explaining their  
369 benefits to the public, and building lasting support for them. One challenge here is that some  
370 programs (e.g. vaccination) can work “too well,” giving the impression they are ineffective or  
371 unnecessary. Public perception can go awry in other ways, too. President Obama’s TARP bailout  
372 was instrumental in growing today’s wind and solar industry. However, this is not well-known  
373 because one small unsuccessful piece of this program—the Solyndra grant—received outsized  
374 attention.<sup>75</sup> Individuals can fill sustaining roles by working to prevent this kind of misperception and  
375 backsliding.

376 Communicating the importance and recruiting individuals to occupy initiating and sustaining  
377 roles exemplifies symbiotic thinking about social change. The specific roles individuals can play are

378 partly determined by their position within social structures, and effectively changing those social  
379 structures requires individuals contribute in a range of ways made available by different roles.

380

#### 381 4.5 Salience

382 How can researchers continue to increase the salience of climate change for voters, and perhaps  
383 create a formidable demographic of “single-issue” climate voters who will put pressure on policy  
384 makers and others poised to enact structural change?

385 Important lessons can be learned from other advocacy organizations, such as the National  
386 Rifle Association (NRA). There is overwhelming bipartisan support in the United States for  
387 restrictions on gun ownership. For example, 93% of Democrats and 82% of Republicans favor  
388 mandatory background checks for private gun sales and gun shows.<sup>76</sup> Nevertheless, no federal law  
389 requires such background checks. The power of the NRA is a central reason why. What the NRA  
390 has done, with nearly unrivaled success, is cultivate “a distinct, politicized gun owner social identity  
391 over the course of many years, which enables it to influence politics by mobilizing its supporters into  
392 frequent and intense political action on its behalf” (Lacombe 2019, 1342).<sup>77</sup> This creates a striking  
393 amount of issue salience for these voters. 71% of Americans who favor less strict gun laws are  
394 unwilling to ever vote for political candidates who support gun control; in contrast, among those  
395 who favor stricter laws, only 34% refuse to vote for candidates who do not share their gun  
396 preferences.<sup>78</sup> For political representatives, this kind of issue salience translates to reliable votes. The  
397 NRA created a constituency by promulgating a gun culture and a social *identity*, and then gradually  
398 but strategically leveraged its reliable votes through elite ties to leaders of the Republican Party.<sup>79</sup>

399 This strategy of “outside lobbying”—in which an interest group influences politics by  
400 motivating mass organized behavior—exemplifies symbiotic thinking about social change. By  
401 creating and then appealing to a specific identity, the organization aims to recruit and motivate  
402 individuals to act in virtue of their position within a set of social structures. By trading reliable blocks  
403 of votes for its policy prerogatives, it achieves structural change by utilizing the power of cumulative  
404 individual actions.<sup>80</sup>

405 Though transposing it to climate change will not be without challenges<sup>81</sup>, this strategy should  
406 be broadly replicable. Indeed, activists and researchers are hard at work in outside lobbying for  
407 climate action. Research guided by symbiotic thinking can continue illuminating how to raise the  
408 salience of climate change for members of different social groups, and how to build a common  
409 identity uniting them. The climate community can also continue advertising the variety of social  
410 roles available to individuals within movement activism; the geographies in which individuals are  
411 more and less likely to confederate around shared identity (e.g., churches); the temporality of  
412 identity-mobilization (e.g., before vs. after an extreme weather event); and so on.

413

#### 414 5. Conclusion

415 We have argued that what starts as useful heuristic—individual vs. structural change—  
416 becomes a confusing impediment when it is interpreted as forcing a zero-sum choice between two  
417 distinct types of interventions. Instead, social structures shape the choices and behavior of individual  
418 people, while those choices and behavior (re)shape the social structures within which people live.

419 Surely some individual actions are more influential than others, just as some structurally-oriented  
 420 policy changes are more influential than others. The way to identify the most promising  
 421 combinations is with symbiotic thinking about the relationships between individuals and structures  
 422 and their power to create change.

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**Table 1**

<b>Topic</b>	<b>Structuralist Claim</b>	<b>Individualist Claim</b>	<b>Interdependence</b>
Causal Insignificance	Individual consumer choices cannot make a material difference to atmospheric GHG concentrations. Only changes to “hard” structures such as laws and material infrastructures can have the requisite causal impacts.	It is precisely the “hardness” of entrenched structures that makes efforts to change them causally insignificant. In the face of immovable structures, it’s rational for individuals to do what they can, e.g., by changing consumption habits.	Structural reforms causally depend on individual changes, and vice versa. The causal impacts of individual choices and structural reforms must be assessed empirically, including consideration of investments of effort against expected outcomes. See §4.3.
Breadth, Depth, Durability	Rather than focus on idiosyncratic issues (e.g., meat consumption), “deeper” and lasting change is needed which addresses the “root” or “underlying” causes of the climate crisis (e.g., economies reliant on fossil fuel extraction and political ideologies such as “neoliberalism”).	Change occurs when individuals are persuaded to make different choices (cf., declines in smoking and drunk driving in the United States).	Deep and durable change is needed, but because of the potential for “failed success” of structural reform—i.e., changes that create backlash sufficient to undo them (e.g., Prohibition in the United States)—structural change must ensure popular support.
Victim Blaming	Ordinary people—especially the global poor—suffer the worst effects of climate change. Asking them to make sacrifices to reduce	All paths to decarbonization must include rapid and massive “demand-side”	Holding individuals responsible for helping to solve collective problems need not entail blaming them. <sup>82,83</sup> Individuals have responsibilities to others

	their carbon footprint unjustly puts the onus on the victims to solve a problem that they did not create.	increases in consumer desire for low-carbon products (e.g., electric cars and electrification of home heating).	given their distinctive social roles (e.g., citizens must vote, businessowners must decarbonize their production chains).
Distraction	Preoccupation with individual (consumer) choice distracts from more effective activities like climate activism. <sup>39</sup> “Greenwashing” has been effective for diverting attention from corporate malfeasance to ineffectual consumer-based “green” identity signaling. <sup>84</sup>	“Green” consumer behavior is not sufficient to solve the climate crisis, but purchasing low-carbon products is virtuous and beneficial.	The crucial empirical question is in when “green” consumer behavior complements or substitutes for structurally-oriented behavior. Identity and consistency effects may drive “green consumers” to be more rather than less likely to engage in climate activism (§3.2).
Meta-Structuralist Belief	Belief systems are consequences of structural phenomena. People subscribe to individualist worldviews because they live in societies organized around individual liberty, and the pursuit of personal wealth and happiness. Inequality increase people’s beliefs in individual responsibility for one’s fate. <sup>85</sup> Changing widely-held beliefs requires changing structures.	Culture is the product of individuals’ choices and values. Structural phenomena like inequality are the product of widely-held meritocratic beliefs.	Widely held beliefs both cause and are caused by structural phenomena. CO2 removal technologies like carbon capture and storage are likely necessary for reaching global net-zero emissions. Public support for CO2 removal technologies is weak in part because they are seen as “too slow” and as failings to address “root causes.” <sup>86</sup>
Corporate and State Responsibility	100 companies are responsible for producing 70% of global GHGs since 1988. <sup>87</sup> The worst offenders have known for decades that their product would create the climate crisis; their response was to	Corporations and governments are run by individuals, who must be persuaded to enact climate friendly	Corporate and government behavior is constrained by “hard” structures, such as law and public policy, as well as “soft” structures, such as social norms, e.g., mandating a narrow commitment to lobbyists

	<p>fund misinformation campaigns about climate science (Oreskes &amp; Conway 2010). They must be held accountable by legislative enactment of pro-climate laws and policy.</p>	<p>structural changes.</p>	<p>and stakeholders' financial interests (§4.2). Changing corporate and state behavior requires changing these hard and soft structures of incentives and constraints, which requires, in turn, action by <i>other</i> institutionally-empowered individuals (e.g., media elites, "social referents," community leaders, norm entrepreneurs, and the ordinary people who must organize to hold empowered individuals accountable (§4.2, 4.4).<sup>88,89</sup></p>
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438 **References**

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