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Psychological Motivators and Deterrents of Collective Environmental Action

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Abstract

This paper reviews the extensive literature with the aim of understanding key elements that either encourage or deter collective environmental action. This paper focuses on psychological determinants of collective action that can influence one's engagement in collective environmental action. Furthermore, how these cognitive influences affect the manner in which an individual will perceive environmentally sustainable initiatives will also be considered. Subjective experiences combined with influential societal norms or pressures are reviewed to distinguish the motivating or deterring conditions to participate. This paper aims to analyze these phenomenological elements in order to better understand the psychological approach to collective environmental action. This review will also outline potential applications of these elements with the intention of facilitating a deeper conversation about the psychological motivations and deterrents of environmental sustainability.

Introduction

Since the industrial revolution, a plethora of societal changes have shifted the human experience immensely. One area of emphatic transformation has been in the modern experience and interaction with nature. This relationship has been highly altered from what it was in the pre-industrial period and the ramifications are far reaching and self-evident. The shift of human behavior since the industrial revolution has led to widespread environmentally harmful behavior that can be identified as a main cause of climate change (Amel et al., 2017; IPCC, 2022). Extreme climate events, such as drought, wildfires, and extreme heat, have been attributed to "human-induced climate change" (IPPC, 2022, p. 9). Slow onset events refer to the risk associated with harmful behavior such as deforestation, loss of biodiversity, and rising sea levels (IPPC, 2022). According to the IPCC Summary for Policymakers report (2022), climate change also negatively impacts humans' physical and mental health. Some of these effects are cited as events of extreme heat causing death and injury globally, increase in occurrence of different types of diseases such as water- or food-borne diseases, and increasing mental health challenges due to trauma of experiencing extreme climate events and the loss of usual lifestyles (IPPC, 2022). It is also worth noting that climate change has been cited as disproportionately impacting vulnerable populations or systems across the globe (IPPC, 2022).

These impacts of climate change highlight some of the reasons as to why this paper will focus on collective environmental action. Climate change is a widespread and pervasive problem

that needs to be fully addressed by the public, by governments, and by industrial systems. Collective action can be defined as any action that an individual takes on behalf of a group in order to improve its conditions (Wright, Taylor, & Moghaddam, 1990a). If the whole population were to act collectively in environmental action, the impact of human-induced climate change could slow down or even reverse (Herring & Lindsey, 2022). This is the main reason for writing this paper. Human action needs to be collective in order to make a real difference in slowing down the problem of climate change because individual action alone is not enough (Herring & Lindsey, 2022). It is possible to provide a healthy and sustainable environment for future generations, but only if humans collectively change behavior {citation}. For this reason, this paper focuses on which specific elements or conditions can effectively motivate individuals to engage in environmentally friendly behavior. Specifically, the research questions guiding this inquiry are:

1. What motivates an individual to act as a part of a larger group working towards a common goal?
2. Why do some individuals avoid joining collective actions?

   This paper aims to answer these questions based on review of the current literature.

Methods

This literature review was conducted using the searchable database of Google Scholar. From November 2022 through January 2023, I used the following key words to define a series of searches: collective action, collective inaction, climate adaptation, collective agency, and environmental action. In using these key words, my searches on Google Scholar resulted in tens of thousands of articles and various material. It was necessary to narrow down these results by reading the titles and abstracts of resulting material. One of the inclusion criteria for this review was publication date. Material published after the year 2000 were considered and these abstracts were read. The choice of this criterion of publication date is due to the rapidly changing condition of climate change. To determine relevance for this study, I compared my research questions to the articles Google Scholar yielded. Initial results were voluminous, so searches of each key word were considered completed once approximately ten articles were found to be irrelevant to the topic of interest. These were narrowed down to 28 articles on the basis of their relevance to my research questions.

Another 52 articles were included in this review but only five of them were a part of my synthesis matrix while the others were supplementary citations for support of key findings. These other articles were chosen from the reference lists of other relevant and key articles used within this paper. For this reason, some of these articles are from before the year 2000 but they pertain to collective action more so than to climate change. For this reason they were included in this review and helped make up the total of 80 articles. All of these searches comprised my entire corpus of data.

Next, I created my synthesis matrix using 33 articles yielded from a combination of these searches to create the foundation of this review. The relevant findings of each of these articles were cited and then organized into similar categories. The initial design of the matrix included broad categories, such as motivators, deterrents, and relevant factors. The second and final design was subdivided by key findings cited throughout the literature that either overlapped with or stood alone from other works included.

Findings

The research questions guiding this inquiry are:

1. What motivates an individual to act as a part of a larger group towards a common goal?
2. Why do some individuals not participate in collective action?

Throughout the literature reviewed for this paper, several different motivations and deterrents for acting as a part of a collective have been cited. The following sections are organized by research question (RQ). For RQ1, key findings were: a) environmentally conscious group consensus; b) alignment of action with social identity; c) sense of hope and clear solutions. Findings of RQ1 are supported by, just to name a few, positively perceived norms, alignment of values with actions, and positive efficacy constructs. For RQ2, key findings were: a) motivated cognition; b) negative social influence; c) lack of hope, connection, or clear solutions. Findings of RQ2 can be supported, in part, by denial of and distance from the environmental problem, pluralistic ignorance, and negative influence from higher systems.

Research Question 1: Motivators of action

The first research question for this study is: What motivates an individual to act as a part of a larger group towards a common goal? Key findings for this question are: a) environmentally conscious group consensus; b) alignment of action with social identity; c) sense of hope and clear solutions.

Environmentally conscious group consensus

Humans have an evolutionary need for social connection (Amel et al., 2017; Bührle & Kimmerle, 2021). We have also evolutionarily learned to follow social norms (Ostrom, 2000). The reason behind this was that survival predominantly depended on the success of one's tribe and the pooling of group resources, as can still be seen today in certain civilizations untouched by modern society (Walker & Hill, 2015). The literature has cited social interaction and approval as having large impacts on individual behavior and on willingness to engage in collective action. The influence of societal acceptance plays a key role in determining which behavior to repeat and which to avoid (Amel et al., 2017; Barr, 2006; Clayton et al., 2021). Humans have a tendency to care about what other people think about their own actions: this tends to have a subsequent effect on their behavior (Amel et al., 2017). Certain actions may be avoided if they are perceived to be unacceptable for meeting standards of the status quo {citation}. People are

often found to behave in ways that can even contradict their own views for the sake of being socially accepted by society (Amel et al., 2017). The literature cites that an individual should feel as though their actions or attitudes are socially supported and accepted through a common consensus in order to encourage action (Amel et al., 2017; Bührle & Kimmerle, 2021; Choi & Hart, 2021; Clayton et al., 2021; Feygina et al., 2010; Finke, 2016; Ostrom, 2000; Pelenc, 2015; Rees & Bamberg, 2014; Simon & Klandermans, 2001; Solér, 1996; York et al., 2021).

In the literature, public support is cited as being crucial for getting people involved with environmental action. It is also important for attributing positive meaning to ecologically friendly products through word of mouth (Solér, 1996). According to (Rees & Bamberg, 2014), the power of normative motives should not be underestimated. Expected reactions or behavior of important "reference figures" can be considered one of the strongest predictors of actual participation in collective action. This is because it is necessary that individuals feel as though their actions and beliefs are socially accepted and supported (Clayton et al., 2021). In fact, Barr (2002) showed that the routine of recycling is actually already an essentially normative behavior. Perceived participatory norms and physical convenience of recycling determine participation in this behavior (Barr, 2002). In terms of collective action, perceived participatory norms can reflect this motivation fueled by the desire for social acceptance. In fact, studies have shown that engagement in public action can become more probable if individuals feel as though other members of their socially identified group are also participating (Doherty & Webler, 2016; van Valkengoed & Steg, 2019). This type of socially motivated action is clearly a very important aspect for understanding what motivates collective action.

Perceived participatory norms greatly influence an individual's likelihood to join collective action (Amel et al., 2017; Clayton et al., 2021). These norms help reflect the importance of social influence and acceptance on individual behavior. Participatory norms affect the perception of how many others participate in collective actions. Positively perceived participatory norms imply that a majority of the population agrees with or participates in a certain cause. This positive perception of social acceptance reduces self-censorship of individuals who may fear social rejection (Amel et al., 2017). The probability of an individual getting involved in collective environmental action will increase once participation is seen as a social norm (Clayton et al., 2021). High estimation that others are likely to cooperate or contribute increases the willingness to join these efforts (Clayton et al., 2021; Rees & Bamberg,

2014). This cooperation can be referred to as conditional cooperation (Ostrom, 2000). These norms even present themselves through an individual's mere perception that other members of their community expect them to participate. This perception reflects a link between an individual's social identity and their intention to participate in pro-environmental collective action (Rees & Bamberg, 2014). Anticipatory rationalization is a process that determines which behavior would be most acceptable to the status quo. Therefore, actions and attitudes with higher public participation or support are viewed as more desirable (Feygina et al., 2010) than those which are perceived as being the minority opinion.

Collective or individual agency is deemed to be an important concept to collective action. It has been defined as individuals working together in order to better the condition of the whole group and not just their own (Pelenc et al., 2013). According to Pelenc et al. (2013), collective agency allows people to go beyond only worrying about their own wellbeing. Agency has been cited as being determined by communal values and social structures (Pelenc et al., 2013). It can also be shaped by motivations and a sense of responsibility (Pelenc, 2015). According to Pelenc (2015), social capital is cited as crucial even for agency. Trust and reciprocity through social capital have been cited to directly contribute to collective agency by encouraging cooperation and limiting any free riding (Pelenc, 2015). Also for this reason it is important for a group to be public about their values via interactions and open discussions that help facilitate group commitment (Pelenc, 2015). In fact, Pelenc (2015) cites building collective agency as requiring the combination of both a material and an intangible basis (Pelenc, 2015). The former refers to the pooling of shared resources while the latter refers to interactions and shared values or representations (Pelenc, 2015). According to Schwenkenbecher (2022), shared agency or interlocking intentions are the strongest form of plural intentions (Schwenkenbecher, 2022). It is also important to note that the literature cites that collective agency cannot be forced or imposed and, instead, must be learned through social interactions (Pelenc et al., 2013).

Alignment of actions with social identity

Common values and goals are also cited as important features that improve one's inclination to behave as a part of a collective Amel et al., 2017; Feygina et al., 2010; Finke, 2016; Ostrom, 2000; Pelenc, 2015; Pelenc et al., 2013; York et al., 2021). Social norms can constrain behavior and cause an individual to act in ways that contradict personal feelings but mimic the status quo (Amel et al., 2017). Collective action participation increases when actions

are aligned with personal values or goals (Amel et al., 2017; Feygina et al., 2010; Finke, 2016; Ostrom, 2000; Pelenc, 2015; Pelenc et al., 2013; York et al., 2021). For instance, a shared common cause or goal enhances enjoyment of others' company and gives an individual a rewarding social identity (Sheldon et al., 2016). Social action theory can be used to explain the individual and group development relationship (Kilgore, 1999). According to Ewart (1991), social action theory puts an emphasis on the influence of social interdependence on an individual's control of their harmful behavior. Congruence of values and goals between individuals of a collective is a crucial motivator for the success of collective action (Finke, 2016). "Opinion-based groups tend to be most successful when they present themselves as being representative or aligned with dominant, positively valued social categories," (McGarty et al., 2009, p. 839). Efforts to be open, receptive, and free of bias are implied in order for a collective to find common ground and resolve differences between themselves (Schugurensky, 2002).

Pro-environmental behavior is strongly predicted by alignment of actions with one's social identity (Amel et al., 2017). Social identity refers to an individual's self-categorization (Schugurensky, 2002; Simon & Klandermans, 2001; Wright, 2009) or self-definition within a group (Deaux, 1996). This identity depends on surrounding social contexts of the individual (Simon & Klandermans, 2001). According to Simon & Klandermans (2001), the term collective identity is a more suitable nomenclature for the identity of an individual as a group member. The term "collective" denotes that the source of identity is shared with others and avoids the implication that other forms of identities are not social (Simon & Klandermans, 2001). Collective identities have five main functions that signal to an individual the ability to depend on solidarity through social support (Simon & Klandermans, 2001). According to Simon & Klandermans (2001), these functions include belongingness, respect, understanding or meaning, distinctiveness, and agency. Politicized collective identity has been cited as a type of collective identity that is formed around an individual's explicit motivations to engage in the struggle for power between groups (Simon & Klandermans, 2001). Strong identification with a politically active collective has been cited to have indirect and direct effects on an individual's intention to partake in collective action (Drury & Reicher, 2009). This occurs by means of collective efficacy expectations and group-based outrage (Drury & Reicher, 2009).

According to Social Identity theory, the perception of identity defining sociostructural qualities can predict the probability of an individual's participation in social movements (van

Zomeren & Iyer, 2009). This can be partly explained by group-based perceptions of injustice. Group-based anger and resentment can then motivate the willingness of individuals to participate in remediating action (van Zomeren & Iyer, 2009). However, it is important to mention that engagement in collective action has been cited as depending on how important one's social group is to them (van Zomeren & Iyer, 2009). This identity is therefore seen as an important starting point towards the readiness to participate in collective action (Rees & Bamberg, 2014). Social identity can also be understood as one's sense of community which is a strong basis of self-definition (Rees & Bamberg, 2014). These points further explain how group identification is a powerful motivational driver for participation due to the social embeddedness of collective environmental action (Rees & Bamberg, 2014).

Social Identity Model of Collective Action aims to determine and explain what predicts participation in collective action (Bührle & Kimmerle, 2021). Predictors of participation are cited as social identity, group efficacy and experiences of group-based injustice (Nguyen et al., 2021). This model proposes that collective action is affected by moral conviction through connection with one's social group, positive predictions of group success, and perception of injustices committed to one's group (Nguyen et al., 2021). In other words, feeling connected to one's socially identified group and having faith in their collective success to overcome perceived injustices create strong motivation to participate in collective action. According to Rees and Bamberg (2014), identification with one's group encourages public displays of commitment towards a social movement. In fact, social cognitive theory rejects the notion that social structures and human agency are separate entities (Bandura, 2006). Bandura states that social systems themselves are created by humans whose lives are then influenced by the norms of these created systems (Bandura, 2006). Ellemers et al. (2002) even argues that crucial determinants of core identity concerns are derived from specific social contexts themselves and from an individual's commitment to a group. In fact, higher alignment with one's social identity is cited as a crucial motivating factor since it increases one's sense of identification with a group which, in turn, increases one's commitment (Amel et al., 2017).

Social identity clearly has an important role in determining one's commitment to collective action (Amel et al., 2017; Bandura, 2006; Bührle & Kimmerle, 2021; Choi & Hart, 2021; Ellemers et al., 2002; Nguyen et al., 2021; Rees & Bamberg, 2014; Simon & Klandermans, 2001; Sheldon et al., 2016; van Zomeren & Iyer, 2009; Wright, 2009). It is also

important to consider the positive impact on action of an individual's sense of connectedness, not just to the community (Barr, 2006; Kilgore, 1999; Pelenc, 2015), but to the natural environment itself (Amel et al., 2017; Sheldon et al., 2016). According to (Amel et al., 2017), feeling connected to nature itself strongly predicts environmentally friendly behavior. Ecologically responsible behavior can also be predicted by personal experience to climate change or environmental catastrophes (Clayton et al., 2021; Foong & Huntley, 2021; Solér, 1996). Direct experience with these extremes causes the problem of climate change to become a more readily available concept to an individual (Clayton et al., 2021; Foong & Huntley, 2021). Higher salience of climate change because of direct experience with climate change also increases the probability of participating in collective environmental action (Clayton et al., 2021). Solér (1996) states that experience with climate change also affects peoples' motives for engaging and their understanding of buying ecologically friendly products (Solér, 1996). According to (York et al., 2021), providing convincing climate change narratives, even through film, can increase public concern and also encourage actions.

The influence of experience or knowledge of the consequences of climate change gives insight into how people can be motivated when they feel as though the problem is personal (Solér, 1996). For instance, that allergy problems can cause worry about having bad reactions to certain products (Solér, 1996). Solér (1996) cites that this personal worry can predict these consumers to act in an ecologically conscious way in order to avoid personal issues (Solér, 1996). "Knowledge about the states and rhythms of nature, acquired from education or experience ... function as ecological cues, reminding people of the relation between environmental issues and themselves," (Solér, 1996, p. 276). These cues positively influence peoples' willingness to participate as ecologically responsible buyers (Solér, 1996). However, it is important to consider that the same ecological cues have been seen to predict different outcomes on individual behavior (Solér, 1996). This can be explained by the principle of intentionality which states that attributed meanings are conditional on the ways that individuals' perceive their world (Solér, 1996). For this reason, ecological cues cannot be assigned to specific factors because what matters is how a consumer experiences these factors (Solér, 1996). However, connectedness to nature, knowledge about the environment, and personal experience, such as allergy issues, seem to make environmental appraisal more meaningful to individuals (Solér, 1996).

Sense of hope and clear solutions

The sense of empowerment within a group has been cited as essential for the successful motivation of collective action (van Zomeren & Iyer, 2009). According to social cognitive theory, one of the central psychological determinants of individual behavioral engagement is cited as efficacy constructs (Choi & Hart, 2021). These constructs include self- and collective-efficacy as well as personal- and collective-outcome expectancies (Choi & Hart, 2021). According to resource mobilization theory, protest occurs only if the collective believes they have the adequate resources to face the problem at hand (van Zomeren & Iyer, 2009). Choi and Hart (2021) conducted a widespread cross-sectional survey to test the impacts of efficacy constructs on willingness to conserve energy and support of climate mitigation policies. These results found that self-efficacy along with both personal and collective outcome expectancy are positively associated with behavioral intention and political support (Choi & Hart, 2021).

Outcome expectancy and self-efficacy are at times viewed as important variables affecting pro-environmental behavior (van Valkengoed & Steg, 2019) as well as efforts to change political systems (Clayton et al., 2021). When it comes to mitigation for climate change, a positive relationship also exists between an individual's political actions and their personal outcome expectancy (Choi & Hart, 2021). Efficacy can therefore be considered as a core psychological element in determining an individual's engagement in collective action and is important to consider for strategies of communication regarding climate change and action (Choi & Hart, 2021). In fact, the social identity model of pro-environmental behavior lists collective efficacy as one of four core processes that influence responses to climate change behavior (Choi & Hart, 2021). Perceptions of an unjust status quo, coupled with collective efficacy and social identity are cited to be predictors of collective action (Rees & Bamberg, 2014). The internal belief that the actions of a collective are meaningful and can effectively prompt change have been cited to increase self-efficacy and be impactful to collective action engagement (Bührle & Kimmerle, 2021).

Social emotions felt through social identities are cited to be represented by group-based emotions (Bührle & Kimmerle, 2021). According to Bührle and Kimmerle (2021), these emotions form a bridge between action tendencies and group-based evaluations (Bührle & Kimmerle, 2021). Both positive and negative emotions have an impact on one's intention to participate. Group-based emotions and perceptions have been cited as predictors of action (van

Zomeren & Iyer, 2009). Hope is an important emotion that can motivate action (Bührle & Kimmerle, 2021; Clayton et al., 2021). For individuals who need an initial push to get involved, a combination of hope mixed with negative emotions has been cited as a strong motivator (Wong-Parodi & Feygina et al., 2021; Chu & Yang, 2019). This combination of emotions may be necessary in order to jumpstart an individual's action from their regular and comfortable habits (Hine et al., 2016). It is important to note that lack of hope has been cited as worsening the denial or distraction when one is faced with a threat (Amel et al., 2017).

Action may also occur through group-based outrage due to the perception of injustices (Bührle & Kimmerle, 2021). According to van Zomeren and Lyer (2009), group-based anger or resentment can motivate one's willingness to engage in collective action while guilt and shame motivate willingness to protest. Through the lens of relative deprivation theory, emotional arousal of the perception of group-based anger or resentment has been cited as predicting collective action (van Zomeren & Iyer, 2009). However, van Zomeren and Lyer (2009) cite anger to be a weak predictor of action because people can reduce this feeling through less costly means that do not require acting collectively. On the contrary, Rees and Bamberg (2014) cite a group-based guilty conscience as emotional motivation for collective environmental action engagement. Guilt and shame have been cited as being linked to long lasting engagement as well as self-creative and restorative behavior (Rees & Bamberg, 2014).

The sense of responsibility has been cited to have a positive influence on pro-environmental actions (Bührle & Kimmerle, 2021). Clayton et al. (2021) has cited that 85% of people say that they have a moral responsibility to provide future generations with a safe and healthy environment. According to Isaacs (1991), moral responsibility of collective actions must have a known, clear, and definitive action solution. Collective obligation can generate responsibilities for people and the sharing of responsibility asks for openness to reform and modifying shared resources through collective inquiry (Clayton et al., 2021). According to Pelenc et al. (2013), there are said to be three levels of human responsibility; to oneself, to one's community, and to Nature. Sense of responsibility towards one's community involves necessary collective agency in order to act as a unified group since individual freedoms are intermingled with those of others (Pelenc et al., 2013). Shared representation of responsibility guides social interactions and helps develop abilities of the group (Pelenc et al., 2013). These social interactions give meaning to individuals' responsibility commitments. The most basic reason for

sustainability becoming a value is caring for oneself and for others, both presently and for future generations. This could explain why Solér (1996) cited that ecological friendly consumer habits have an inherent component of moral responsibility.

Perceived collective efficacy, group-based emotions, and social norms have been cited to simultaneously and directly predict an individual's intention to participate in collective action (Rees & Bamberg, 2014). Internal motivation has been cited by Sheldon et al. (2016) as a very important motivator of a plethora of pro-environmental behavior. Internal motivation produces stronger intentions to continue participation and has greater predictive power than external motivation (Sheldon et al., 2016).

Social norms affect individuals' choices and intentions but are also shaped by industrial and governmental systems. These systems can either facilitate or frustrate environmental action depending on their activities and ideals (Ostrom, 2000). Organizational culture is cited as a powerful influence on individual behavior via values, social norms, and policy implementation (Amel et al., 2017). Barr (2003) cited that recycling is essential normative and that people tend to increase their recycling habits when they positively perceive participation and that it is supported by convenience. This convenience can be implemented by pro-environmental choice architecture and government assistance in policy implementation that could alleviate an individual from the pressure of having to educate themselves (Amel et al., 2017). The literature also cites that expected outcome efficacy of higher system regulations have positive influences on both private and political ecologically friendly participation (Choi & Hart, 2021). Public integration of values into higher system decisions allows for communication and transparency

Tracking supply chains of industrial systems and connecting these practices to their environmental outcomes can help promote sustainability in consumers' decisions (York et al., 2021). York et al. (2021) also cites that dialogue and feedback loops in between levels of these systems and with the public can lead to the establishment of trust and communication of norms between the two. For example, the role of trust from higher institutions has been cited as affecting individuals' intention to buy environmentally sustainable labeled beef (Stranieri et al., 2023).

<u>Research question 2: Deterrents of action</u>

The second research question for this study is: Why do some individuals not participate in collective action? Key findings for this question are: a) motivated cognition; b) negative social influence; c) lack of hope, connection, or clear solutions

Motivated cognition

Humans have a tendency to rationalize their current states whether it be about political systems, sociocultural identifications, or even acts of discrimination (Feygina et al., 2010). Defending current practices in this way can cause compliance and inaction. In fact, these tendencies of system justification have been associated with less commitment in pro-environmental action and more denial of the reality of climate change (Feygina et al., 2010; Labarre & Felonneau, 2022). System justification theory explains how people readily justify and defend their personal and collective current habits or systems. In the case of environmental action, peoples' reluctance to participate may be caused by their feeling intimidated by the gravity of the problem; on the other hand, it may also be caused by decisions of choosing comfort associated with their current lifestyles (Amel et al., 2017; Clayton et al., 2021; Feygina et al., 2010). An individual will defend their current practices when facing a threat, according to system justification, because it prevents the discomfort of having to accept an idea contradictory to their own (Feygina et al., 2010).

Prevention of discomfort can also occur through biased filtering of information through motivated cognition (Amel et al., 2017). Information that confirms or aligns with pre-existing ideas will have a higher probability of acceptance as compared to ideas or information that contradict prior beliefs (Amel et al., 2017; Bain et al., 2012; Bührle & Kimmerle, 2021; Clayton et al. 2021; Feygina et al., 2010; York et al., 2021). Prior beliefs are created and encoded through past experiences and influence how an individual makes decisions or adds value to different concepts (York et al., 2021). Pre-existing conceptions and value attributions then also affect how a person reacts or behaves. Motivated cognition can negatively impact collective environmental action because of rejection of accurate scientific data that contradict an individual's personal opinion (Feygina et al., 2010). Widespread climate change denial is linked to motivated cognition and system justification tendencies (Feygina et al., 2010). These tendencies create the demand of supplying more evidence and information to these "deniers" in order for them to accept a view contrary to their prior beliefs (Feygina et al., 2010; York et al., 2021). Peoples'

perceptions of life are the basis for which meanings are attributed (Solér, 1996). This creates more justification of current behavior and rejection of new or different attitudes.

System justification tendencies can even become politicized and linked to denial about climate change itself (Labarre & Felonneau, 2022). Politicized collective identities shape an individual by affecting the salience of norms (Amel et al., 2017; Bain et al., 2012; Clayton et al., 2021). This identity can also constrain ecologically friendly behavior rather than motivate it. In fact, a conservative politicized identity has become consistently linked to environmental denial and skepticism (Clayton et al., 2021). Unfortunately, about twenty percent of American adults are still dismissive or unsure of the reality of climate change (Leiserowitz et al., 2021). People in the United States who identify as politically conservative tend to downplay the severity of the climate crisis (Campbell & Kay, 2014; Clarke et al., 2019) or doubt and misremember that the environment has been changing because of it (Hamilton et al., 2018; Zanocco et al., 2018). Accepting the idea that there is a problem with current practices and institutions entails the necessity to fix and change these systems.

Egoguilt is a concept that refers to feelings of shame based on one's actions. Egoguilt can predict the intention to perform environmentally friendly behavior since it can mediate the link between action taken to protect the environment and an individual's standards of environmentally harmful behavior (Mallett, 2012). However, it can also create discomfort for the individual. This discomfort is reduced by justifying their harmful behavior and minimizing the environmental problems at hand (Mallett, 2012). This threat to the legitimacy of current practices causes people to turn to denial (Feygina et al., 2010).

Negative social influence

Absence of clear or vocal social support of a collective problem has been cited as causing reluctance to discuss the problem with others (Clayton et al., 2021). According to Clayton et al. (2021), an individual's perceptions of a group consensus may differ from their own opinions which has been seen to lead to not even acknowledging the problem. Due to anticipatory rationalization, there is more reluctance to publicly discuss attitudes or actions that are seen to be the minority opinion or are perceived as less popular (Clayton et al., 2021). The reluctance that occurs when participatory norms are negatively perceived creates deterring conditions to participating in collective action (Clayton et al., 2021). If it seems as though there is little social acceptance of certain behavior, the willingness to engage in said behavior decreases. In regards

to climate change, people underestimate participatory norms which, consequently, reduce the willingness of individuals to participate in collective environmental action (Amel et al., 2017). This underestimation contributes to pluralistic ignorance and discourages individuals from partaking in collective action (Amel et al., 2017; Clayton et al., 2021).

Pluralistic ignorance is precisely the belief that others do not share the same values or opinions as one's self (Clayton et al., 2021). This has been cited as another major problem of collective action, in general, and, more specifically, collective environmental action. This belief occurs due to lack of overt expressions of support by others which causes this underestimation that their own opinions stand alone (Clayton et al., 2021). Therefore, a key motivator to pro-environmental action is social acceptance and support of actions. If more people were to be vocal in their environmentally friendly attitudes, the probability of participation in this collective action would likely increase (Bührle & Kimmerle, 2021; Clayton et al., 2021). Individuals will feel more motivated to participate due to having less fear of rejection from others or of free-riders (Reuben, 2003) taking advantage of collective efforts.

Plurality of different agents and unstructured groups lacking unification hinder collective action (Schwenkenbecher, 2022). According to Finke (2016), multiplicity of interests can occur due to the large diversity of individual members of collectives. Inherent incongruence in goals or interests can create barriers to collective action (Finke, 2016). Interaction can be impeded by self-serving or differing interests of agents, such as different reduction of costs or protection of resources (Finke, 2016). Finke (2016) also cites that companies can fail to partake in collective environmental action due to this wide range and diversity of actors' interests. Olson's model of collective good provision states that there is an inherent "free-rider" problem that causes people to act based on self-interests during the provision of goods (Olsen, 1965; Reuben, 2003). The prisoner's dilemma game is a very useful characterization of Olsen's model and can help better understand collective action (Reuben, 2003). In this game, behavior can either be motivated by self-interest by increasing personal gains and minimizing efforts, or by acting with others in order to maximize overall gain (Reuben, 2003). According to Hardin (1971; 1982), Olsen's model can sometimes reflect the same structure as the prisoner's dilemma.

Lack of hope, connection or clear solutions

"Individuals vary greatly with respect to how much value they place on the environment" (Pickering & Dale, 2023, p. 1). If the environment is not appraised in a meaningful

way, individuals are less likely to participate in action to protect it (Amel et al., 2017). Psychological distance to the problem of climate change can reduce the level of importance individuals' attribute to this issue (Amel et al., 2017; Clayton et al., 2021; York et al., 2021). This feeling of distance can deter collective action (Clayton et al., 2021). Feeling an emotional jolt or noticing tangible signals are crucial for the perception that climate change is a pressing issue (Amel et al., 2017). If not, people may identify climate change as being distant (Amel et al., 2017). Variability in climate change effects has been cited as making this crisis no longer alarming and more difficult to detect for some people (Moore et al., 2019). People need to understand the strong link between their wellbeing and climate change (Foong & Huntley, 2021). In fact, feeling as though one's welfare is associated with the risk of climate change significantly increases ecologically conscious behavior (Baldassare & Katz, 1992). It is important to mention the difference between an individual's intention to participate versus their actual participation. Barr (2006) presented results that indicate that fundamentally different factors are responsible for the prediction of an individual's intention to participate versus their actual participation. This refers to the value-action gap in which there is a discrepancy between intention or willingness to participate and actual participation (Barr, 2004; Barr, 2006).

One of the reasons for this gap may be a contingency gap (Amel et al., 2017; Choi & Hart, 2021; Foong & Huntley, 2021; York et al., 2021). This gap refers to psychological distance and salience of consequences (Amel et al., 2017). Distance associated with environmental issues reduces the motivation of the long-term consequences of climate change (Amel et al., 2017). The contingency gap states that short-term consequences, both positive and negative, are more salient than long-term consequences (Amel et al., 2017). According to York et al. (2021), the tradeoff between short-term consequences and long-term benefits of ecologically friendly behavior is undesirable. Values attributed to immediate and short-term outcomes are valued as more meaningful and notable than those occurring in the future (Amel et al., 2017; York et al., 2021). "Far-off" or "hard-to-detect" outcomes are less convincing and more lacking in motivation than short-term costs and benefits (Amel et al., 2017). An individuals' costs and benefits expectation of available resources is also a motivating factor in whether to participate or not in collective action (van Zomeren & Iyer, 2009). These points explain how willingness or intention to change behavior is negatively affected by the salience of short-term consequences of actions (Amel et al., 2017). These consequences could include the tendency to pay more money for ecologically

responsible products (Solér, 1996), the complexity and confusion associated with these products (Isaacs, 2011; Sheldon et al., 2016; Solér, 1996), and the intimidation (Amel et al., 2017; Clayton et al., 2021; Sheldon et al., 2016) or discomfort (Rees & Bamberg, 2014) associated with changing one's ways in order to purchase these products.

Complexity of climate change, in general, can deter action. Mental models of the complex situation of climate change can be inaccurate or even incomplete (York et al., 2021). External factors, such as not enough information, tend to take the blame for people who do not engage in collective environmental action (Sheldon et al., 2016). Lack of clarity can occur as a result of climate change communication because of the unfamiliarity and complexity of the topic (Feygina et al., 2010; Schwenkenbecher, 2022; Solér, 1996; York et al., 2021). The mere idea of ecological friendliness is riddled with uncertainties and complexities that makes it difficult for consumers to rate how harmful products may be (Solér, 1996). For this reason, people may not even realize the consequences of the environmentally harmful behavior all around them (Schwenkenbecher, 2022). According to Schwenkenbecher (2022), lack of any serious thought on matter may even occur. The immediate impacts of pro-environmental behavior on climate change are not promptly visible but collective actions of individuals will, ultimately, make an impact on the whole world (Lubell, 2002; Ostrom, 2010). For this reason climate change has also been cited as a collective risk social dilemma (Choi & Hart, 2021; Lubell, 2002; Ostrom, 2010). According to Isaacs (2011), individual understanding of clear and coordinated solutions or strategies for action is a prerequisite for feeling morally obligated to act.

Implicit beliefs that environmental action will not create impactful change have been cited as reasons why people do not start to act at all (Clayton et al., 2021). In this case, low efficacy or outcome-expectancies have been cited as predictors of lack of action (Clayton et al., 2021). People have been cited as being less likely to participate in action when they believe that their efforts will not be rewarded or will not succeed (Clayton et al., 2021; van Zomeren & Iyer, 2009). In fact, if an individual lacks hope through low efficacy, fear of a problem will cause stagnation, resignation, and even denial (Clayton et al., 2021). Unstable interactions between personal and collective efficacy constructs creates difficulty in changing peoples' perceptions of collective efficacy (Choi & Hart, 2021). In other words, people view personal efficacy and outcome-expectations as constructs separate from collective ones, possibly because actions or intentions of others cannot be controlled. Worth mentioning is the inverse relationship between

internal and external efficacies that has been cited by Choi and Hart (2021). For individuals who have a high level of internal efficacy, external efficacy was not cited to have influenced their willingness to participate in pro-environmental behavior (Choi & Hart, 2021). Instead, for those with low internal efficacy, willingness to participate in climate action was cited to be positively associated with external efficacy (Choi & Hart, 2021).

Industrialization of the world has immensely changed the ways of life of people globally as well as the interaction of humans with nature (Amel et al., 2017). Furthermore, Amel et al. (2017) cites that reinforcement of environmentally harmful practices have been encouraged and perpetrated by industrial and political systems. According to Heede (2014), only 90 businesses have been estimated to have produced 63% of greenhouse gas emissions. Since most of the current industrial systems enforce over consumption and polluting habits (Amel et al., 2017), necessity for global policy shifts has been cited (Clayton et al., 2021; IPCC, 2018). In enforcing environmentally harmful behavior, industrial systems have also been cited to make sustainable practices unappealing and difficult to attain (Amel et al., 2017; Solér, 1996). This has been partly explained in the literature by the tendency for ecologically sustainable products to be more expensive (Solér, 1996). Organizational culture has been cited to strongly influence individuals through the communication of norms, policies, or type of leadership (Amel et al., 2017; Inoue & Alfaro-Barrantes, 2015). This culture has been cited to have the potential to determine the "choice architecture" that guides decisions and actions of private and public spheres (Amel et al., 2017). As already mentioned, political participation for climate change has been cited to increase when government regulations outcome-expectancies are perceived to be successful (Choi & Hart, 2021).

Throughout the literature, there have been some overlaps in strategies that have been cited as ineffective for promoting collective environmental action. Firstly, reporting only drastic or intimidating scientific facts about the progression of climate change has been cited as not being enough to motivate action or policymaking (Amel et al., 2017; Bain et al., 2012; York et al., 2021). Dire environmental news have been cited to create internal conflict of an individual's needs, such as security and safety, and can actually motivate environmentally harmful behavior (1). Simply trying to educate or emotionally motivate individuals through the presentation of facts or use of guilt and anger has been cited as not shifting behavior (Amel et al., 2017; Bain et al., 2012). Reminding the public of their responsibility to collectively act has been seen as not

enough for motivating them to change their long-held routines (Rees & Bamberg, 2014). Critical reflection in the absence of social organization and support of structures that facilitate change has also been cited as ineffective for promoting social transformation (Schugurensky, 2002). Community-based social marketing campaigns have been seen to have some positive effects but are cited as not enough to effectively motivate collective environmental action (Amel et al., 2017; Rees & Bamberg, 2014). Social marketing campaigns are cited as lacking any infrastructural basis that are supposed to help facilitate change behavior in individuals (Rees & Bamberg, 2014) . "Trying to persuade people to consume and waste less through behavior change programs will not address the larger and more significant problems concerning the ways under which people need or think they need to live and consume," (Uzzell, 2008, p. 4). In other words, these programs do not address the underlying issue of human-induced climate change (Rees & Bamberg, 2014; Uzzell, 2008). Blaming or targeting individuals for their contribution of greenhouse gas emissions while not addressing the real climate change danger of industrial systems' emissions has been cited as ineffective in motivating change behavior (Rees & Bamberg, 2014).

Implications

Definitions of "collective action" and efficacy constructs in the literature

It should be noted that there are some discrepancies within the literature regarding the definition of collective action (Wright, 2009). This is an issue for true understanding of what motivates collective action since different definitions of collective action will produce different determinants of it (Wright, 2009). Collective action has been cited as occurring any time an individual acts on behalf of a collective and strives to improve the conditions of that collective (Wright, 2009). According to Wright (2009), an action can be considered collective not on the basis of its size, but rather based on individuals' intentions and their level of self-categorization. This is consistent with the understanding that human behavior can also be intergroup (Tajfel, 1982), and not just interpersonal, since certain behavior is dependent on collective identities and group-interests (Wright, 2009). In fact, Wright (2009) cites that collective action can even occur by one individual acting on behalf of a larger group. According to Louis's (2009) more psychological definition, neither physical nor temporal proximities are requirements of collective action. However, the literature has still cited collective action as equated to group protest (Sturmer & Simon, 2011), crowd behavior (Drury & Reicher, 2000), and unified social action (McGarty et al., 2009). Future implications for research could involve outlining a clear definition of collective action as distinct from other cited group-based activities. This could help ensure that both sources of research are understood distinctly and avoid conflation. A unified understanding of the definition of collective action could be beneficial for increasing global collective environmental action.

As for efficacy constructs, the literature has had a tendency to confuse or conflate four different cited types of efficacy (Choi & Hart, 2021). There seems to be a gap in the literature involving these constructs as self-efficacy, personal outcome-expectancy, collective-efficacy, and collective outcome-expectations are not often studied together while still being considered as distinct constructs (Choi & Hart, 2021). According to Choi & Hart (2021), self-efficacy and personal outcome-expectancy are often conflated with each other which creates the difficulty of understanding their individual effects. There is also limited research regarding environmental behavior and these four efficacy constructs (Bostrom et al., 2019; Choi & Hart, 2021; Doherty & Webler, 2016; Hamann & Reese, 2020). Implications for future research involve further

development of the impacts of efficacy constructs on environmental behavior in order to apply a higher volume of findings to methods of motivating collective environmental action.

Reinforcement of pro-environmental group consensus, improvement of efficacy via clarity of solutions, and positive influence from industrial and governmental systems

Implications in practice for motivating collective environmental action based on this research include reinforcing an environmentally friendly group consensus, improving efficacy constructs through clarity of solutions, and ecologically friendly influences from industrial systems. Social influence and support have been cited many times throughout the literature as strong motivators of collective action since people crave social acceptance. The way in which norms are communicated has also been cited as making a crucial impact on the adoption of certain attitudes or actions. For this reason, more visible and vocal communication about peoples' environmentally friendly attitudes or actions should be divulged in order to motivate participation (Solér, 1996). Social modeling could be used to reset negatively perceived participatory norms or group consensus (Amel et al., 2017). Perceived participatory norms could help motivate collective environmental action through clear communication of a common group participation and consensus. Communication of a common environmentally friendly consensus would establish sustainable behavior as a social norm which would increase peoples' commitment to participating in collective environmental action. Framing of communication in a way that focuses on the short-term benefits of pro-environmental behavior and the short-term consequences of human-induced climate change could potentially motivate collective environmental action by reducing effects from the contingency gap (Amel et al., 2017).

In order to alleviate some of the deterring effects of justification tendencies, it may be important to consider how system justification can also be used to encourage pro-environmental behavior. The negative effects of these tendencies can be reduced significantly if information is presented in a way that does not sound any alarms (Feygina et al., 2010). The perceived negative association between preserving the status quo and behaving pro-environmentally can be avoided if attitudes are perceived positively. In order to do this, environmental behavior should be framed in a way that aligns with the values of "deniers" of ecologically friendly habits (Bührle & Kimmerle, 2021; Clayton et al., 2021; Feygina et al., 2010). For example, presenting this behavior as patriotic and as preserving the status quo will greatly reduce any denial associated with acting in this pro-environmental way (Feygina et al., 2010). Framing pro-environmental

behavior in this way communicates that this behavior is “system sanctioned” and in alignment with the general consensus of society (Feygina et al., 2010).

According to York et al. (2021), governmental systems could also incentivize ecologically responsible behavior and punish harmful behavior of organizations and industrial systems. Organizations can promote environmentally friendly practices through the communication of norms and reinforcement of group consensus (York et al., 2021). York et al. (2021) also cites that public integration within organizations or higher systems can allow for public values to be included in decisions made by higher systems and helps facilitate transparency. Shared understanding and communication of facts, values and norms within an organization can help reduce depolarization and increase collective environmental action (York et al., 2021). If industrial systems were to adopt a more pro-environmental choice architecture, individuals and consumers would be able to participate in sustainable behavior less effortfully (Amel et al., 2017). More ecologically friendly product options would allow for more ease of the consumer in feeling confident that most will be sustainable (Amel et al., 2017).

Discussion

Collective environmental action is truly necessary in order to combat climate change and limit its effects. For this reason, understanding the key determinants of collective action is crucial for the state of our planet. The influence of social support on both intention and actual participation in collective action has been well documented. The innate desire to feel socially connected and supported is a key finding that motivates collective environmental action. This finding can be taken into consideration when designing methods of public implementation of sustainable behavior. Individuals are more likely to participate in collective environmental action if they perceive that their social group supports, shares, and participates in an ecologically responsible manner. Complexity of climate change can cause confusion while insecurity of social rejection can cause lack of participation. Both of these deterrents to collective environmental action could be addressed by adopting clear communication that speaks directly to public values, rather than just presenting scientific facts. Reluctance of public participation in collective environmental action may be addressed by clear communication of social support, a shared consensus, and a clear action plan to follow. The issue and impact of climate change is global and ever more pervasive. Collective environmental action is a solution to this global issue that requires global participation in order to resolve it. Hopefully, these findings presented in this review will help to further elucidate the motivations and deterrents of collective environmental action in hope of increasing global sustainability.

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APPENDIX:

Additional articles included in synthesis matrix

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