# HOW DOES HUMANITARIANISM SPREAD? MODELING THE ORIGINS OF CITIZEN INITIATIVES THROUGH NORM DIFFUSION

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## ABSTRACT

This paper describes a prototype agent-based model used to explain why and how a norm of humanitarianism diffuses through a population. The model is constructed on norm diffusion theories as a foundation for developing explaining the emergence of Citizen Initiatives in a humanitarian and development context. We assume that in the model, some agents are already norm adopters (advocates), some have a humanitarian potential that can be activated with persuasion, while others will never adopt the norm of humanitarianism under any condition. In this model, we try to determine whether parameters such as agents' values, thresholds for accepting alternative values, values degradation, and peer-pressure affect agents' decision to become humanitarian activists.

## 1    INTRODUCTION

Imagine vacationing on a beach in the Mediterranean doing the normal tourist activities, like dining at local restaurants and sunbathing by the sea, when you notice a boat arriving at the water's edge. They aren't locals or tourists, they are refugees fleeing conflict from various parts of the Middle East and North Africa. In the next few days, thousands more arrive. Perhaps you've never thought of yourself as a humanitarian. Maybe you donate some money each year or month to a charity and volunteer occasionally, but you have a life and a career very distant to the world of humanitarian response to disaster. Would this experience change all of that? Would you be so moved by witnessing such a great humanitarian need that you would change the course of your life and career to serve humanitarian interests?

This scenario actually happened—in many places, but very recently in the Greek islands—and some individuals were, in fact, moved to change everything about their lives and become humanitarian aid workers while others never did. For a variety of reasons including witnessing events or learning about catastrophes through traditional and social media, people are increasingly moved to action for both humanitarian response and international development in ways that result in the formation of grassroots, localized citizen initiatives. These are not the large humanitarian and development organizations with which most people are familiar, but rather start-up nongovernmental organizations (NGOs) that may have five or fewer employees and operate mainly from donations mobilized through personal social networks. These Citizen Initiatives are vastly changing the humanitarian aid and development architecture; the global

community's traditional methods of administering assistance during disasters or to aid health, education, and infrastructure development around the world are being changed by agile, specialized Citizen Initiatives with their own agendas and means of administering aid.

The rise of Citizen Initiatives, inspired by the individual responses to the refugee crisis on the shores of Lesbos, Greece, is the primary focus of this paper. The objective of the initial model presented here is to understand how and why humanitarian norms spread. This is part of a larger initiative to model the emergence, existence within traditional aid architectures, and growth or death of Citizen Initiatives. Here, we try to build a model of humanitarianism as a norm based on theories of norm diffusion. The theoretical model will serve as a foundation for modeling the typologies of Citizen Initiatives that arise in different global contexts in a future work.

## 2    HUMANITARIANISM & NORM DIFFUSION

We define humanitarianism here as the potential for (and act of) trying to help others in need, where need is framed by either development initiatives or response to disaster. In this sense, humanitarianism is the provision of relief from social disadvantages such as hunger and famine, flight from conflict, or disease. While some might be motivated to contribute humanitarian acts based on an internalized identity, utility maximization may provoke others into action. In our model, we only distinguish between those who are moved to *act* on humanitarian values and those who are not. People who donate to humanitarian causes may fall along this spectrum of humanitarianism, but we do not differentiate them from those who do not act. Some—in fact, many—in society may never be moved to become humanitarians. They may be ignorant of the humanitarian opportunities, calculate that the costs of action outweigh the benefits, or even be opposed to that kind of work. Action here implies mobilizing resources, contributing volunteer hours, or other physical expressions of humanitarianism outside of financial contributions. Future versions of the model will attempt to account for financial donors as well. We focus on action to better answer our questions about the emergence of Citizen Initiatives (CIs).

To get at the emergence of CIs, we must first understand how norms of humanitarianism spread through society. This is important both for the CIs themselves, but also later for understanding the potential donor base that CIs utilize to maintain their operations and objectives in the field. Using the literature on norms and norm diffusion, we make some initial assumptions in the model. First, we assume that actors (agents) in the model have a varying potential for humanitarianism: some already have internalized the humanitarian norm and are taking action to help those in need, others may need persuasion by peers to adopt the norm, and some may have such small potential for humanitarianism that they can never be pushed to action. There exist some similarities between our model and the voter model or diffusion of innovation model (Rogers 1962). By contrast, the voter model does not consider elements of personal interaction such as people's emotion or values. Indeed, it does not consider "Degrade-percent," which we use to capture people losing interest in being humanitarian over time. The innovation model similarly does not consider "Degrade-percent." This factor gives us some insight about humanitarian norms which may be different from other types of cascading norms that pass tipping points.

### 2.1    What is a Norm?

Defining a norm is a complicated task. It is studied across many disciplines from political science to sociology to psychology. Each perspective contributes to our understanding of how norms manifest internally to individuals and externally as they spread across society. Many scholars, however, have reached a consensus that a norm is a standard of appropriate behavior for people with a given identity (Katzenstein 1996; Finnemore 1996; Klotz 1995). Norms vary in type. The norm of driving on the left or right side of a road is one that has strong pressures to conform (e.g., to prevent accidents) and may have reached a point of adoption that even those opposed are forced to conform (e.g. laws and fines preventing someone from driving on the opposite side of the road). These norms may have tipping points beyond which the society does not put much thought into returning to the previous norms (Epstein 2001). Others norms, like

humanitarianism, have less visibility in society and less impact on other people. It follows then, that these norms are more difficult to regulate through laws or punishments, diminishing the opportunity for tipping points. Much norm research is built on the former, where individuals eventually feel extreme pressure to conform and adopt the norm themselves. In this study, we must contextualize theories of norms to accommodate the idea of humanitarianism which may never experience such pressures.

Finnemore and Sikkink (1998) described a "norm lifecycle" in political science to explain how a norm will distribute across a state. This lifecycle consists of three ordered stages: 1) norm emergence; 2) norm cascade; and 3) internalization. Between stages 1 and 2, society experiences a tipping point where adoption of the norm becomes increasingly fast (cascading). This idea was furthered developed by Moskovko (2012), to include conceptualizing more specifically the tipping point beyond which norms tend to be adopted by all members of society. Figure 1 depicts this norm lifecycle.
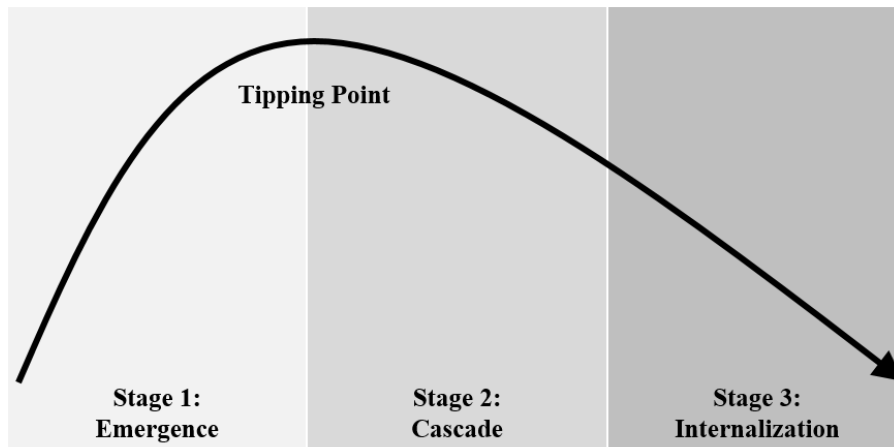


Figure 1: Norm Lifecycle.

### 2.1.1  Norm Emergence

During the initial stage in the lifecycle of a norm, an individual (or individuals) begin to promote a new norm. These individuals are known by a variety of terms—entrepreneur or promoter—but for the purposes of our paper, we will call these individuals "advocates." This group of people has truly internalized the norm as *the* appropriate way of behaving or acting based on individual factors such as their values, ideas, ethical beliefs, and/or religion. As characterized by March and Olsen (1998), norm advocates do not consider the consequences of their actions; in other words, they are not seeking to maximize their utility. These are true believers. What the advocates do is push the norm out into society and encourage others to adopt it. This role is crucial for creating a framework of adoption within the larger society: the idea of appropriate behavior that resonates with others (Finnemore and Sikkink 1998). These advocates try to convince leaders—political or otherwise—to acknowledge and support the norm as the appropriate social behavior. Those leaders are motivated by logic of consequences. They consider the consequences of adopting or not adopting the norm and attempt to maximize their utility and benefits in terms of enhancing their legitimacy and self-esteem. Leaders are not yet included in our model of humanitarian norms.

To accomplish their goals of norm adoption, the advocates must rely on institutions such as international organizations or nongovernmental organizations (NGOs). More specifically, advocates socialize norms through experts and leader training. Social media and networking through organizations plays a significant role in advocates' activities as they attempt to make information accessible to the leaders who can support and even enforce norms. When norm diffusion has achieved this level of formal advocacy and momentum, the balance of power between norm opponents and proponents shifts, leading to a tipping point (Gilardi 2010). In terms of humanitarianism, the advocates use international organizations and NGOs

to encourage charitable giving (individual and national levels) as well as action. US refugee resettlement programs are largely the result of this kind of citizen initiative in historical post-war eras as advocates lobbied for norms of mass immigration to alleviate post-conflict suffering (Loescher and Scanlan 1986).

### 2.1.2 Norm Cascade

Upon reaching the tipping point, a considerable portion of the society begins to support the new norm. The rate of norm diffusion across the population occurs faster than in the initial stage, and any group of people are primed to adopt the norm based on their cost/benefit analysis of norm adoption. Advocates and leaders socialize the new norm, using persuasive means to encourage others to also adopt the norm. Momentum is gained at this point because not only are advocates pushing for norm adoption, but localized levels of peer pressure will encourage others on an individual basis to consider adopting the norm as well. Not all people will be accepting of the new norm, however. Some will always remain resistant to the new norm if they lack the desire to actually be members of the larger social group (e.g. nonconformists or nonbelievers) (Flockhart 2010). Returning to the example of Lesbos, Greece, the influx of refugees in a tourist area precipitated a movement of grassroots organizations from people of all walks of life who witnessed the event or heard about it through traditional and social media. What was once a relatively rare act of dropping career and other life aspirations to help others rapidly became a norm in Lesbos, which had major impacts on the traditional methods of humanitarian assistance provision.

### 2.1.3 Internalization

In the final stage of norm diffusion, people begin to accept the norm as *normal* and no longer debate its adoption. At this stage, the norm is taken for granted as a fact of life. This is more readily visible in the adoption of norms that have potential for pushback against non-adopters. Once enough people decided to drive on the left side of the road, for instance, others were forced to conform (through life preservation or to avoid fines). Most people now go about their days without much thought about the side of the road they drive on. This is slightly more complicated for abstract forms of norm adoption, such as humanitarianism. While many do accept that some people will work as humanitarians and adapt their lives and careers accordingly, there is very little potential that a majority of any society will adopt this norm or lifestyle, and it is far more difficult to determine whether a society has moved largely toward a humanitarian framework (internally) or not.

### 2.2 Norm Diffusion from an Agent-Based Approach

Finnemore and Sikkink (1998) offer one of the predominant theories of norm diffusion that forms the foundation of norm research across disciplines. This theory, however, explains norm diffusion from the top down based on ideas about power, from a political science perspective. We are specifically interested in a bottom-up approach—how to humanitarians *arise* from a given population—in order to eventually explore how Citizen Initiatives emerge. With this level of analysis in mind, we must instead turn to micro-level theories that explain individual-level behaviors and communication that lead to norm diffusion (Flockhart 2006). Thus, we extrapolate these theories to focus on actors as individuals outside of an international political context. Future efforts will situate these actors in this larger political sphere. Adapting the macro-level theories, we conceptualize our two current agent types as advocates/promoters and general people.

### 2.2.1 Humanitarian Advocate Agents

The group of humanitarian advocate agents comprise actors similar to the conceptualization of "norm entrepreneurs" (Finnemore and Sikkink 1998). Advocates already have an identity as humanitarians and do not need convincing to adopt a norm; in fact they also can never be turned away from this norm. This group

is crucial to spread the humanitarianism norm. We also borrow from the idea of "innovators" in the theory of innovation diffusion (Rogers 1962) and "radicals" in models of collective behavior (Granovetter 1978).

It is difficult to clarify the motivations of the advocate group for having already adopted the norm, but generally their values, ideas, and emotions set them apart as 'believers.' In terms of humanitarianism, we conceptualize these individuals broadly as those who may have personal experiences—such as a childhood lived in a refugee camp—or simply the innate desire to help others. It is difficult to disaggregate the group as their motivations may be heavily based on high individual values of empathy, altruism, and ideational commitment (Finnemore and Sikkink 1998). This disaggregation of individual motivations is the ultimate goal of our project. For now, however, we focus here on developing a model that considers existing norm theory which we will later combine with ethnographic field research to understand different typologies of advocates (Haaland and Wallevik 2014). Specifically, this group exists in the model to promote the norm among others. We assume away their ability to lose interest in their norm (or humanitarian pursuits), though this will be considered as we later add typology complexity to the model.

### 2.2.2 General People as Agents

The other agent type in the model encompasses ordinary people. These are not zealots or true believers, but rather rational actors who seek to adopt norms based on input from other individuals in the model. Each agent has a latent potential for humanitarianism (some very low, some very high, but most in the middle) and a threshold beyond which they will be moved to act (become humanitarians through physical actions of volunteering). The exposure to new norms of humanitarianism come through a variety of interactions with other agents, both general and advocates.

Agents bend to peer pressure to adopt a norm of humanitarianism (Finnemore and Sikkink 1998). Though their threshold for action is constant, their latent values/potential for humanitarianism are constantly shifting. Norm theory tells us that motivations for bending to peer pressure comes from emulation of heroes (interaction with advocates, in our model); praise and reputation that encourages conformation to norms; and ridicule from others about deviating from the norm (Waltz 2010). Psychologists inform our understanding of peer pressure through the theory of cognitive dissonance. This idea has been explained as people attempting to blend with others' beliefs around them in order to maximize their utility (Epstein 2001; Parsi and Yetiv 2008; Young 2006). In our simulation, this is modeled such that agents have a peer-pressure majority by which they just the values of those around them.

Modelers have used this to model norm diffusion by describing it as the "best reply to recent sample evidence" (Young 1996) and "conformity or social proof" (Axelrod 1986). In our model, we give the agents a randomized value for how much they conform to peer pressure (groups, rather than one-on-one). If there are enough norm-adopters around them, they will adjust their own values relevant to their decision algorithm to reflect this peer pressure.

The general population uses a simple decision algorithm to interact with other agents based on the attitude shift model of Jager and Amblard (2005). Each agent possesses a threshold of acceptance and rejection. For individual encounters, if the agent's own humanitarian values differ too greatly from those of the agent with whom it is interacting (beyond the threshold of rejection), then it will actually adjust its values in the opposite direction (less inclined to act). If the values do not differ greatly at all (within the threshold of acceptance), the agent adjusts its values to be closer to that of the other agent (more inclined to act). In this case, the other agent has convinced them of the value of humanitarian action. Values between rejection and acceptance result in no adjustment to the agent's values.

In a group, the agent calculates the number of norm adopters as a percentage of total agents in the group. If the percentage is above their peer-pressure-threshold, they adjust their values to the average value of all *adopted* agents' values. If the percentage is below their threshold, they make no adjustments and move on. To account for the different effects of encounters on individuals, agents' updates to their humanitarian potential for action (values) are weighted by the type of encounter: general one-on-one,

advocate one-on-one, or group. Note that currently, in the group, the advocate does not have more convincing power than the collective agents who are norm adopters.

One additional feature we added to the model was to allow the agents to degrade their humanitarianism over time (excluding the advocates). This is to attempt to represent some kind of "donor fatigue" due to the high opportunity costs of engaging in humanitarian acts. Anecdotal evidence from qualitative fieldwork among Citizen Initiatives indicates that this may be a factor in the survival of CIs over the long-run, but we do not yet understand how much "fatigue" is realistic for our setting. To that end, we gave this parameter the most granularity in the simulation experiments below to try to understand what effect it might have in a theoretical, simulated humanitarian space.

## 3    SIMULATION RESULTS

We ran the simulation of this prototype model to try to understand the impact of promoters and peer-pressure weights on the tipping points of norm adoption. Unlike traditional norms, humanitarian norms are unlikely to engulf the entire population, but rather stay confined to a small portion. The model is not at the stage where we are prepared to perform validation with ethnographic field data, but we ran the ANTS model to explore the parameter space for anomalies and are relatively confident that our model is performing as we expect (Miller 1998).

### 3.1    Experimental Design

The simulation incorporated 2,594 parameter combinations. This was scaled back considerably from our original design for computational reasons, but the large number of parameters in the model made it difficult to reduce the experiment very much. One value that was held constant to reduce the combinations explored was population, which we held at 1,000 agents for each simulation run. We were attempting to explore the parameter space, and thus at this point do not have a sense of where to narrow the parameter test values. Future versions of this study will explore alternative sampling designs (e.g. Latin Hypercube sampling) to better understand the parameter space. The following parameter combinations were tested:

- Model-Type:  "check neighbors" (include peer-pressure of groups), and "no neighbors"
- mu-activist-state: mean humanitarianism value of all general agents, heterogeneous for all agents on a scale of 0 to 1 (0.2, 0.4, 0.6)
- mu-activist-threshold: mean threshold value of all general agents beyond which they become active humanitarian actors, heterogeneous for all agents on a scale of 0 to 1 (0.4, 0.6, 0.8)
- Degrade-percent: amount per time step that an agent degrades its humanitarianism values, to represent donor fatigue (0, 5, 10, 15, 20, 25)
- Percent-promoters: what percentage of agent population are advocates (0, 5, 10)
- Promoter-zeal: homogeneous value given to advocate agents' humanitarianism values in the model (0.6, 0.8, 1)
- Promoter-weight: how much weight the promoter exerts on changing the agent's humanitarianism values (0.5)
- General-weight: how much weight is given to a one-on-one interaction with another general agent (0, 0.2, 0.4)
- Peer-weight: how much weight is given to the average humanitarian values of a group of nearby agents (0.6, 0.8, 1)

### 3.2    Simulation Results

An Ordinary Least Squares (OLS) regression was run to determine the parameters that affect agents' decisions to become "active" humanitarian actors in two different models: "Check Neighbors" and "No Neighbors." These simulation results consider the following agent interactions in the model:

- General one-on-one with General
- General one-on-one with Advocate
- General considering percentage of humanitarian agents within a given radius

In these models, we look to see if the main variables (i.e., mu-activist-state, mu-activist-threshold, degrade-percent, percent-promoters, promoter-zeal, general-weight, and peer-weight) influence the agents' decisions to become humanitarian activists in the model. This is measured using a dependent variable of the percentage of activists out of the total population of agents in the model. The results are shown in Table 1.

Table 1: OLS regression output for statistical models of simulation runs.

| VARIABLES | (1) Model Full | (2) "Check Neighbors" | (3) "No Neighbors" |
|---|---|---|---|
| model type | -0.192*** | | |
| | (0.000587) | | |
| max-peer-pressure | -9.31e-07 | -3.14e-06 | 1.27e-06 |
| | (2.63e-05) | (3.87e-05) | (2.52e-05) |
| promoter-weight | 0.00115*** | 0.00197*** | 0.000328 |
| | (0.000360) | (0.000530) | (0.000346) |
| peer-weight | 0.0180*** | 0.0361*** | 6.14e-07 |
| | (0.000360) | (0.000530) | (0.000346) |
| general-weight | 0.0350*** | 0.0532*** | 0.0168*** |
| | (0.000360) | (0.000530) | (0.000346) |
| mu-activist-state | 0.0279*** | 0.00887*** | 0.0470*** |
| | (0.000360) | (0.000530) | (0.000346) |
| mu-activist-threshold | -0.0528*** | -0.0908*** | -0.0149*** |
| | (0.000360) | (0.000530) | (0.000346) |
| promoter-zeal | 0.0154*** | 0.0383*** | -0.00747*** |
| | (0.000360) | (0.000530) | (0.000346) |
| degrade-percent | -0.0186*** | -0.0275*** | -0.00975*** |
| | (3.44e-05) | (5.07e-05) | (3.30e-05) |
| percent-promoters | 0.0143*** | 0.0193*** | 0.00926*** |
| | (7.19e-05) | (0.000106) | (6.91e-05) |
| Constant | 0.567*** | 0.456*** | 0.104*** |
| | (0.00211) | (0.00282) | (0.00184) |
| | | | |
| Observations | 419,904 | 209,952 | 209,952 |
| R-squared | 0.534 | 0.642 | 0.379 |

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Based on the result, max-peer-pressure is the only variable that has no statistically significant impact on agents' decisions to become humanitarian activists across all statistical models. Promoter-weight and peer-pressure are also have no statistically significant impact on agents' decisions to become humanitarian activists in "No Neighbors" model types.

For the initial simulation runs, we used fixed levels for each of the variables. Statistical significance gives insight into the impact of agent interactions on the spread of norms, but we must probe deeper to detect the relationship between chosen agent values and threshold levels to understand what is happening

in the model. We can see that as the mean humanitarianism value (mu-activist-state) of all general agents increases, the simulation ends with a slightly larger percentage of activist agents in the model. The same situation applies for percent of advocates (promoters) in the model, as well as the average values held by advocates (promoter-zeal). Additionally, as the influence of one-on-one interactions with other general agents (general-weight) increases, we see more people converted to activism. In other words, when each of these variables increases, it causes a larger percentage of agents become activists. On the other hand, we can see as agents' average threshold for being convinced to become activists increases (mu-activist-threshold), we see a decrease in activists in the model. This is as we would expect, since agents who are harder to convince to become activists not only are not activists, but their one-on-one interactions with others will occasionally move other agents away from activism as well. Additionally, as we increase the amount of natural degradation that occurs at each time step to curb the enthusiasm of activist agents, the final percentage of activist agents decreases.

Figure 2 shows us that, in a relatively linear way, increases in the percent of humanitarian advocates (Percent-promoters), average level of humanitarian values of advocates (Promoter-zeal), and weight placed on peer interactions (General-weight) increase the percentage of humanitarian activists in the model. It should be pointed out that model type has a statistically significant impact on the percent of activists in the model. In other words, the percentage of agents who become activists in the "check neighbors" model tends our model, given that the "check neighbors" model incorporates agents' decision to become humanitarian if enough nearby agents are also humanitarians.
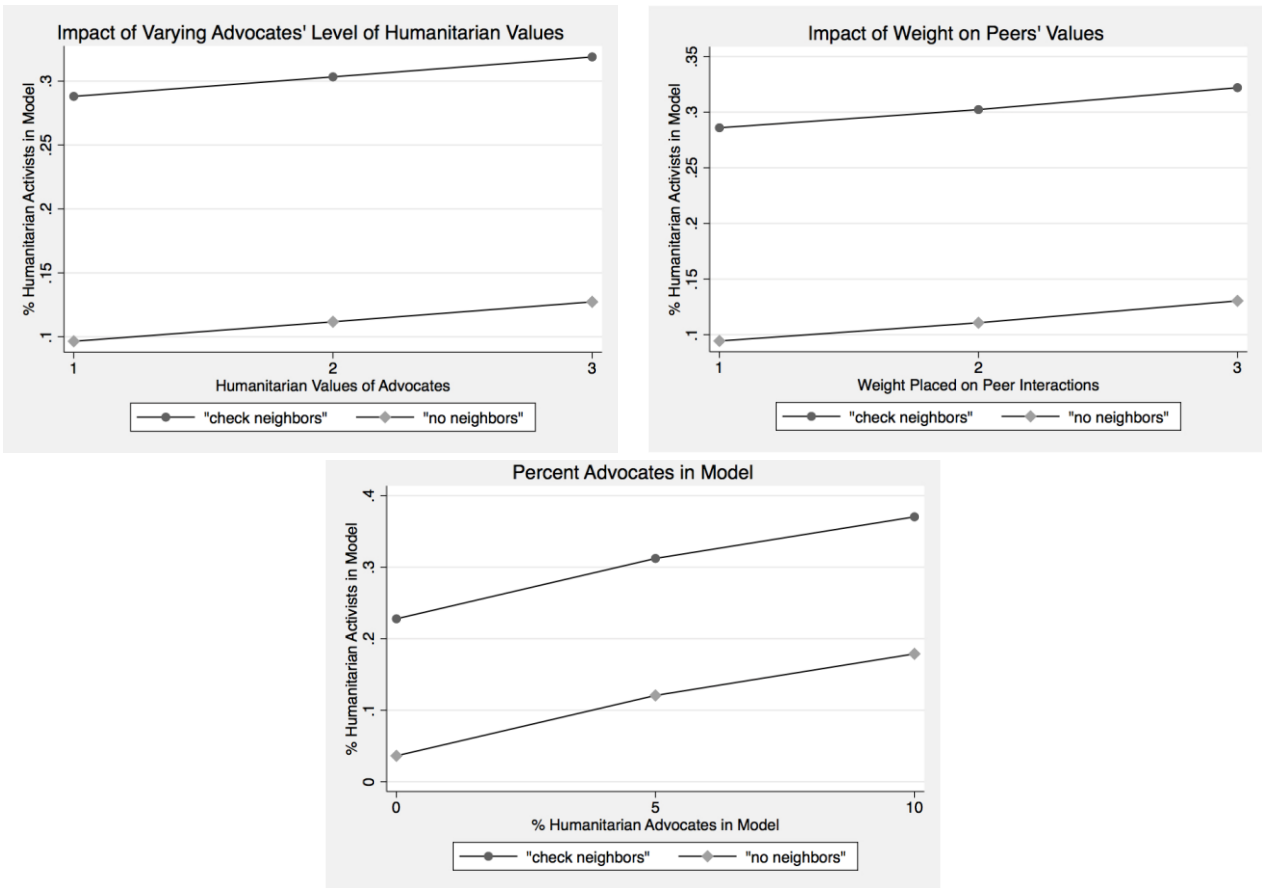


Figure 2: Effect of percent of humanitarian advocate, humanitarian value of advocate, and weight placed on peer interaction on Percent of Humanitarian Activist.

These results fit what we expect in the real world. Interestingly, these values tend to converge irrespective of parameter settings at less than 25% of the population becoming activists. While this also reflects what we might expect in the real world regarding Citizen Initiatives, where we see high levels of humanitarian interest and some collective action towards those goals, we must collect further macro-level data on CIs to see if this convergence phenomenon is realistic and why.

Figure 3 shows us that, in a relatively exponential way, increasing the percentage of degradation in humanitarian values that the agent experiences at each time step influences the outcome of humanitarianism in the overall simulation. We modeled this component to explain a kind of 'donor fatigue' where some people lose interest over time. This result gives us some insight about an interesting feature of humanitarian norms which may be different from other types of cascading norms that pass tipping points. In fact, tipping points do happen in the model, but degradation of values is a largely limiting factor of this phenomena that should be explored more fully. Unlike other types of norms, humanitarianism requires a significant amount of effort and energy to maintain overtime. Anecdotally, we know that this is challenging, though we have yet to incorporate data about the rate at which activists leave a system to become 'general' people again with less humanitarian conviction. While some social norms such as wearing business suits every morning to go to work begin to happen thoughtlessly, humanitarian norms such as working with refugees may not ever become an unconscious act for anyone but the zealots (advocates, in our model). Many will find that mobilizing resources to sustain that level of humanitarianism is unsustainable for many reasons, and choose to leave the field. This is a particular area for future CI research as the ephemeral nature of some grassroots initiatives can be extremely challenging for traditional aid organizations to work with in order to secure consistent, equitable, and sustainable support for humanitarian emergencies and development work.
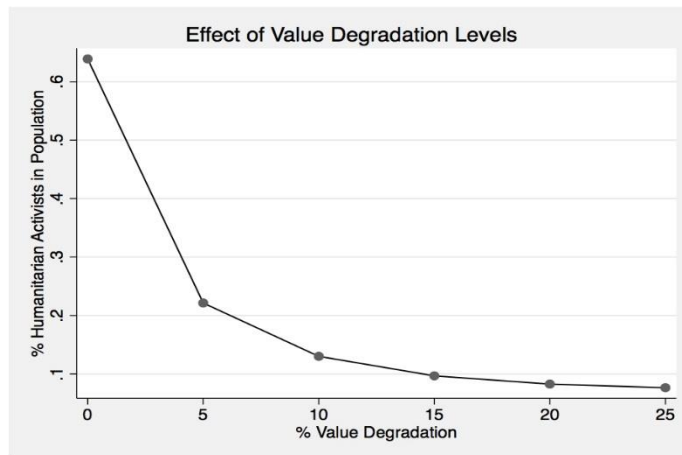


Figure 3: Effect of value degradation on percent of humanitarian activists.

## 4    CONCLUSIONS AND NEXT STEPS

There are three major directions for this project in the future. First, we plan to add an additional influential agent type based on literature of "elites" in norm theory. These represent people such as celebrities or other highly socially influential individuals who can spread norms rapidly through their social networks. In the case of Lesbos, Greece and our work on Citizen Initiatives, this could be likened to the arrival of Susan Sarandon on the island to bring awareness of refugee issues (Sayej 2015). Locals attribute this celebrity visit to the rise of many unregulated ad-hoc, grassroots refugee initiatives that sprung up all over the island (Fieldwork, Lesbos, Greece 2017). To represent this in the model, we will also build in a social network component that allows agents to spread norms not only through face-to-face contact but also through more distantly proximate relationships.

Second, we intend to put significant effort into disaggregating the advocate agents, and even some of the highly motivated general agents, to better reflect the typologies of Citizen Initiative actors described by Haaland and Wallevik (2014). Our crucial first steps to establishing baseline norm transmission will allow a solid foundation on which to understand the emergence of CIs and lead to further research about their influence in the aid environment and eventual rise/demise as legitimate, recognized organizations.

Finally, we intend to use ethnographic field research and the input of experts who conduct this research on the ground in order to verify and validate the model. The current version of the model is built on norm diffusion theory mainly from the field of political science. In order for the model to be useful for policymakers who navigate the aid environment and negotiate relations with CIs to deliver effective humanitarian and development assistance, we will work to use all available (mainly ethnographic) data on CIs to ensure our model is correct and appropriate. While the model is in its early stages, it has significant potential to advance the research efforts around Citizen Initiatives and help to ground policy discussions that allow traditional aid and development organization to navigate in an increasingly complex aid environment.

## ACKNOWLEDGMENTS

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