

INFORMAL MATERIAL CONVERGENCE BEHAVIOR AND EMERGENCY
MANAGEMENT: LOOKING A GIFT HORSE IN THE MOUTH

A Paper
Submitted to the Graduate Faculty
of the
North Dakota State University
Of Agriculture and Applied Science

By

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In Partial Fulfillment of the Requirements
for the Degree of
MASTER OF SCIENCE

Major Program: Emergency Management
Department Name: Emergency Management

March 2013

Fargo, North Dakota

North Dakota State University Graduate School

Title

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MASTER OF SCIENCE

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ABSTRACT

Informal material convergence behavior is the spontaneous movement of unsolicited donations from donors to emergency management for disaster relief activities. This behavior is widely accepted as an appropriate social response after disasters. However, this behavior frequently results in excessive amounts of unsolicited donations which create numerous problems for emergency management. Most donors appear unaware of the issues associated with contributing unsolicited donations. The challenge is to reeducate the media and the public about what are considered the appropriate types of donations to contribute for disaster survivors.

Informal material convergence behavior is a problem that can be resolved through social-psychological approaches. Social-psychological research can be used in donation strategies to help solve this problem. This includes incorporating persuasive techniques into hazard awareness messaging, using technology and social media to convey the messaging, and conducting more disaster research and monitoring to ascertain if messaging is received, interpreted, and acted upon as intended.

ACKNOWLEDGEMENTS

I have been blessed to have had so much support and assistance. With much gratitude and thanks I first want to acknowledge God Almighty, for He has generously given me His divine love, mercy, and kindness throughout this process. “And we have known and believed the love that God has for us. God is love, and he who abides in love abides in God, and God in him” 1 John 4:16. I want to thank Christ Jesus, the Lord and Savior of my life, through grace and faith I have been redeemed. “That in the ages to come He might show the exceeding riches of His grace in *His* kindness toward us in Christ Jesus. For by grace you have been saved through faith, and that not of yourselves; *it is* the gift of God, not of works, lest anyone should boast” Ephesians 2:7-9. I want to thank the Holy Spirit for all the divine inspiration, guidance, and providence that I have received exactly when it was needed. “But the Helper, the Holy Spirit, whom the Father will send in My name, He will teach you all things, and bring to your remembrance all things that I said to you” John 14:26.

With very special thanks, appreciation, and much gratitude I am very beholden to Dr. George Youngs for his excellent stewardship, governance, and supportive voice as the head of my graduate committee. I would like to express much gratitude to Dr. Daniel Klenow, Dr. Carol Cwiak, Dr. Greg Sanders, and Dr. D.K. Yoon for their superb guidance throughout my graduate education. Much thanks to friends and colleagues, Dr. Jessica Jensen and Jeanine Neipert, for their continued support, guidance, and camaraderie. I would like to thank the Department of Emergency Management at North Dakota State University for their excellent support and tutelage. Lastly, I am thankful to my mother Gail Green for continually praying for me to follow God’s plan for me. “And we know that all things work together for good to those who love God, to those who are the called according to His purpose” Romans 8:28.

PREFACE

According to *The Cambridge Dictionary of American Idioms* (2003) to look a gift horse in the mouth means “to criticize or refuse to take something that has been offered to you.” This idiom often follows the words “never” or “not” as in this example: never look a gift horse in the mouth. *The McGraw-Hill Dictionary of American Idioms and Phrasal Verbs* (2002) defines this in the figurative: “to be ungrateful to someone who gives you something; to treat someone who gives you a gift badly.” The etymology of gift horses comes from the notion that the age and the potential value of horses can be determined by looking inside their mouths at the condition of their teeth – also known as long in the tooth (Cambridge, 2003). The indication is that it is considered disrespectful to inspect for flaws in what is given and received freely.

Don't look a given horse in the mouth first appears in English print in 1546 in John Heywood's *A dialogue conteinyng the nomber in effect of all the prouerbes in the Englishe tongue*: “No man ought to looke a geuen hors (i.e., gift horse) in the mouth.” The English version likely comes from the 5th Century writer Jerome in *The Letter to the Ephesians*: “Equi donati dentes non inspiciuntur” (A given horse's teeth are not inspected) or “Noli equi dentes inspicere donate” (Never inspect the teeth of a given horse) (Funk, 1948; Titelman, 1996). Although scholars disagree on the exact origin of this idiom, in modern terms, this is what can be derived: receivers should be thankful for what is given to them and not insult givers by inspecting gifts for value and usefulness. However, when it comes to unsolicited donations contributed to emergency management for disaster relief activities, it is wise to examine informal material convergence behavior and look the gift horse in the mouth.

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CHAPTER ONE. CONVERGENCE POINTS: INFORMAL MATERIAL CONVERGENCE BEHAVIOR AND EMERGENCY MANAGEMENT

Informal material convergence behavior and its effects on emergency management and disaster relief activities in the aftermath of disasters are examined. Disasters are described as the “central gravitational field for convergence” that attracts people, information, and materials to the nexuses of the disaster-impacted areas (Fritz and Mathewson, 1957, p. 13). Disasters are defined as extreme events that exceed the local available resources to effectively manage them (Auf der Heide, 2003). Local capacities are often strained by the amount of resources required to manage disaster relief activities. Survivors in heavily-impacted communities often are without essential resources and services for prolonged periods. Disasters and extensive media coverage of survivors’ plights repeatedly trigger *convergence* (Johnstone, 1919; Fritz and Mathewson, 1957; Scanlon, 1992). Convergence is a behavioral response to disasters in which the movement of personnel, news/information, and/or material resources are sent into disaster-impacted or threatened communities intended to support disaster relief activities; hereon known as *convergence behavior* (Fritz and Mathewson, 1957). There are three forms of convergence behavior: *personal* as the movement of people, *informational* as the flow of information and communications, and *material* as the movement of goods (Johnstone, 1919; Prince, 1920; Fritz and Mathewson, 1957). Informational and material convergence are considered *substitute convergence* for personal convergence; sending news/information and material resources instead of going to and/or sending personnel to disaster sites (Fritz and Mathewson, 1959; Phillips, 2009). Personal convergence and informational convergence are well-researched in the disaster

literature; however, material convergence behavior, its causes and effects have not been studied as thoroughly.

Material convergence behavior is defined as the movement of physical resources, such as goods, supplies, and/or equipment, from one source or site to another source or site (Fritz and Mathewson, 1957). There are two types of material convergence behavior, *formal* and *informal*. Formal material convergence is the authorized movement of material resources from public sector entities (i.e., government), private sector entities (i.e., nongovernmental for-profit), and private nonprofit sector entities (i.e., nongovernmental, nonprofit – hereon, nonprofit sector) to requesting public and nonprofit entities with authorized disaster relief responsibilities (Fritz and Mathewson, 1957). Requesting entities use the requested resources to supplement mission support functions and disaster relief activities. Formal material convergence is the sanctioned transfer of donated, loaned, and purchased resources; pre-established through legally-binding memorandums of understanding, mutual aid agreements, and emergency management assistance compacts, etcetera. Resource transfers can occur before, during, and after official emergency and disaster declarations are made. Formal material convergence is necessary for emergency management to conduct its disaster relief activities.

Informal material convergence behavior, in contrast, is the spontaneous movement of unrequested material donations and resources contributed for disaster relief activities. Informal donors include individuals, families, businesses, churches, schools, nonprofit community and faith-based groups, etcetera. Emergency management does not sanction informal material convergence behavior (Fritz and Mathewson, 1957). This spontaneous behavior results in *unsolicited donations*, unrequested contributions of physical or material resources (FEMA, 2003). Formal material convergence is necessary for disaster relief activities; however informal

material convergence behavior and resulting unsolicited donations cause significant issues for emergency management and disaster-impacted communities (FEMA, 2003). This paper examines informal material convergence behavior from the three different perspectives of donors, historical events, and recipients, and documents its effects on emergency management and disaster relief activities.

Informal material convergence behavior is considered a collective prosocial behavioral response to disasters (Fritz and Mathewson, 1957; Dynes, 1994; Lindell et al., 2006). *Gerrig and Zimbardo (2002)* defined *prosocial behavior* as “behaviors that are carried out with the goal of helping other people.” Prosocial or helping behaviors are collective responses often expressed after shared emotional experiences; these are intentional, voluntary actions designed to benefit others and/or have positive social outcomes (Staub, 1978; Penner et al., 2005). Some donors contribute resources with no expectation of compensation and/or rewards while other donors expect some compensation and/or rewards in return for helping others (Penner et al., 2005). Whether rewards result or not from contributing donations; however, many macro-level factors (i.e., social norms, media influence, and advancing communications and information sharing technology) and micro-level factors (i.e., costs, legitimacy, and trust) affect donors’ decisions to help others beyond receiving rewards. Social cognitions and demographic factors also affect prosocial and help giving behaviors.

Emergency management prefers financial contributions for disaster relief, not unsolicited donations (FEMA, n.d.). Most donors appear unaware of the troublesome issues associated with unsolicited donations. Material donations are frequently contributed in excessive quantities that are too onerous to manage effectively (Neal, 1994). Transporting material donations into disaster-impacted areas is often done haphazardly and causes extensive logistical difficulties

(Fritz and Mathewson, 1957). Valuable and limited resources are too often used to manage unsolicited donations (Neal, 1994).

Emergency management supervises both requested and unrequested donations after disasters. *Emergency management* is defined as “the managerial function charged with creating the framework within which communities reduce vulnerability to hazards and cope with disasters” (IAEM, 2007). Emergency management includes public, private, and nonprofit sector entities that have officially sanctioned responsibilities to perform one or more of the four phases of disaster relief activities (i.e., response, recovery, mitigation, and preparedness). Donations management is designed specifically to oversee unsolicited donations contributed after disasters. Donation managers attempt to use quality donations for disaster relief activities however most unsolicited donations do not reach disaster survivors (FEMA, 2007). Some material donations are refused by emergency management, some are returned to donors or redirected for non-disaster purposes, while most are discarded or destroyed (FEMA, 1999a).

Informal material convergence behavior is a highly problematic issue for emergency management. This behavior is considered a universal phenomenon after disasters. It is well-known in emergency management; however, it is not well-studied in the disaster literature (Fritz and Mathewson, 1957; Scanlon, 1992). Most nonprofit organizations do not accept unsolicited donations for disaster relief activities (Dennison, 2005). For example, the nonprofit organization, the American Red Cross, has a century-old policy for receiving donations from the general public; which is to request (and accept) financial contributions only for disaster relief (FEMA, 1999; Kim, 2006; Regalbuto, 2010). Such organizations have determined through years of experience that financial contributions are the best donations. When material donations are needed; most nonprofit organizations use pre-established relationships with vendors to request

specific donations (ARC, n.d.). Most nonprofit organizations do not receive government funding and rely exclusively on private financial contributions to fund their disaster relief activities. Managing unsolicited donations is very expensive, time consuming, labor intensive, and redirects limited resources away from other critical areas. Despite nonprofit organizations' best efforts to inform and educate donors of the need for financial contributions, many donors continue to contribute unsolicited material donations rather than provide requested monetary donations.

To understand why unsolicited donations are consistently contributed in response to disasters, emergency management must take a social-psychological approach to the problem of informal material convergence behavior. New forms of *socialization* are needed to reeducate donors and to provide them the proper incentives to donate responsibly to disaster relief activities. Socialization is defined as “the lifelong process whereby an individual's behavioral patterns, values, standards, skills, attitudes, and motives are shaped to conform to those regarded as desirable in a particular society” (Gerrig and Zimbardo, 2002). This reeducation process would need to focus on recalibrating donors' cognitive processes (i.e., what they think) and modifying donors' responses (i.e., how they behave) after disasters. *Cognitive processes* include higher mental activities like memory, language, and problem-solving and *behavior modification* is “the systematic use of principles of learning to increase the frequency of desired behaviors and/or decrease the frequency of problem behaviors” (Gerrig and Zimbardo, 2002). Thus emergency management should consider strategies that coalesces cognitive processes and behavior modification together to control informal material convergence behavior. *Cognitive behavior modification* “combines the cognitive emphasis on the role of thoughts and attitudes influencing motivations and response with the behavioral emphasis on changing performance through modification of reinforcement contingencies” (Gerrig and Zimbardo, 2002). Thus

widespread cognitive behavior modification measures are needed to convert the undesired prosocial behavior (i.e., contributing unsolicited donations) into the desired prosocial behavior (i.e. contributing monetary donations) to control informal material convergence behavior.

At the core of the monetary versus material donation dilemma is a distinct difference in perspective between donors and emergency management. From the viewpoint of many donors, material donations are the best donations to provide for disaster relief activities (Helium, 2010). Some donors consider material donations tangible resources that can be used immediately for survivor relief (Helium, 2010). Others believe contributing material donations avoids the potential for fiscal mismanagement which often occurs with monetary donations (Helium, 2010). Donors may see the decision as having two options only, provide material donations or contribute nothing at all. Yet many donors are unaware that the greatest need after disasters is for financial contributions. From the emergency management perspective, financial contributions are the best donations donors can provide for disaster relief activities (FEMA, n.d.).

Financial contributions are preferred for several important reasons. First, financial contributions are easiest and most convenient donation for donors to provide and simplest donation for nonprofit organizations to receive and process (FEMA, 2007). Advancing technologies in communications, information, and electronic commerce have simplified the manner in which financial contributions are made (Hughes et al., 2008). Little effort is needed to contribute monetary donations; donors can contribute funds electronically through telephone, cell phone texting, and internet websites using debit cards, credit cards, and electronic checks. Little effort is also needed for submitting financial contributions through delivering checks, and money orders in person and through the postal service. However the increased speed, ease of use,

efficiency, and availability of technology has added to the growing popularity of electronic submissions (Hughes et al., 2008).

Second, financial contributions are the fastest, most efficient manner of getting needed resources to disaster survivors (FEMA, 2007). Nonprofit organizations are contracted to operate most donations management activities after disasters and often manage both monetary donations and material donations (solicited and unsolicited). Nonprofit organizations prefer financial contributions because they have the capacity to rapidly access and process financial transactions especially those made electronically. Monetary donations from diverse areas can be quickly pooled together and used to make an immediate impact. Funds can be instantly disbursed and used to purchase needed material resources and services (FEMA, 2007). Nonprofit organizations have the knowledge and the experience to effectively manage monetary donations to meet needs (Holguin-Veras, 2011). Material resources can be purchased from local businesses within disaster-impacted areas and help speed the local economic recovery (Dennison, 2005; Kim, 2006, MEMA, n.d.). Resources purchased in local markets reach survivors much quicker and more efficiently than donations transported over long distances (FEMA, 2007; Regalbutto, 2010).

Third, financial contributions are utilized better than material resources purchased and donated. Nonprofit organizations like the American Red Cross have tremendous purchasing power; greater than most donors possess (MEMA, n.d.). Through bulk purchasing, nonprofit organizations can leverage significant discounts through pre-established relationships with vendors and expand the value of financial contributions (MEMA, n.d.). Financial contributions provide nonprofit organizations the flexibility to purchase specific, needed resources from multiple vendors in different local markets (FEMA, 2007). Thus financial flexibility allows for greater opportunities to assist more survivors in a multitude of varying disaster scenarios.

Fourth, financial contributions alleviate most problems associated with managing and transporting of unsolicited donations. Donations management requires considerable time, personnel, labor, and money to collect, inventory, store, transport, and distribute material resources (Wachtendorf et al., 2010; Regalbuto, 2010). Monetary resources are frequently wasted transporting unsolicited donations long distances. Needed material resources often can be purchased locally, reducing transportation expenses, and helping the local economy (Holguin-Veras, 2011). Costs for transporting donations often exceed their value (Regalbuto, 2010). Transporting unsolicited donations is extremely difficult when local infrastructure is damaged and/or impassable (Wachtendorf et al., 2010). Local roads and highways can be clogged and congested with shipments of unsolicited donations and inhibit emergency response (Neal, 1994; Wachtendorf et al., 2010).

Fifth, financial contributions are crucial to fund disaster relief. Nonprofit organizations do not receive government funding and are solely supported by charitable contributions. Financial contributions fund programs such as mass care and sheltering, crisis counseling, pastoral care, child and pet care, survivor needs assessment, and household clean-up and repair for disaster survivors (FEMA, 2007). Without financial contributions nonprofit organizations would cease operations; their services would have to be provided by the public/private sectors or not at all.

Sixth, financial contributions are also preferred for international disasters (Holguin-Veras, 2011). Managing donated material resources for international disaster relief activities is burdensome and time consuming (Regalbuto, 2010; Holguin-Veras, 2011). Monetary donations avoid the problems associated managing and transporting goods across geopolitical borders (Wachtendorf et al., 2010; Holguin-Veras, 2011). Customs services can delay and/or deny material donations from entering and crossing borders through quality and quantity checks and

aid can be taxed as tariffs and port costs (Holguin-Veras, 2011). Non-priority donations can overwhelm ports and delay shipments of critically needed resources (Regalbutto, 2010). Financial contributions reduce the need to store and ship items into foreign nations, better used to purchase products locally, and stimulate the native economy.

To address and overcome the challenge of these diametrically opposed perspectives, emergency management needs to address two specific issues. First, emergency management has to make a commitment to communicate long-term hazard awareness messaging to the general public. *Hazard awareness messaging* is long-term risk communications related to preparedness, mitigation, and recovery topics intended to persuade donor's thoughts and modify their actions to increase their safety and wellbeing (Lindell and Perry, 2004).

Second, emergency management needs to begin monitoring communication channels and feedback to assess if hazard awareness messaging is received, interpreted, and acted upon as intended (Foy, 2012). Emergency management seems to view risk communications as one way or unidirectional (i.e., sender to receivers); thus failing to recognize the value of multidirectional communications (i.e., sender to receivers and receivers back to senders) (Lindell and Perry, 2004). Hazard awareness messaging has the potential for long-term social change; however public feedback is a necessary component for determining the effectiveness of messaging (Lindell and Perry, 2004). Public feedback is therefore crucial to measure and ascertain if receivers are interpreting and acting upon the messaging as intended.

I am of the opinion that informal material convergence behavior is a preventable problem that emergency management can solve through messaging and long-term educational efforts. I believe emergency management should make the extra effort to reeducate the media and the public on what donations are appropriate for disaster survivors and necessary for disaster relief.

I consider the next two challenges critical for emergency management to determine whether (or not) messaging strategies have or are reaching desired expectations and results. The first challenge, educate and inform the media and general public to which types of donations are appropriate and necessary for donors to contribute to disaster survivors. In this first challenge, emergency management would need to develop mechanisms to send messages and receive feedback to determine messaging effectiveness. Thus, these actions would establish warning and non-warning messaging as multidirectional mediums for risk communications in order to increase messaging effectiveness. And the second challenge, based on the education component from the first challenge, help establish a new social norm for what, how, and where donors are to contribute donations after disasters. In this challenge, society would need to accept messaging over time in order for a new norm to emerge and become the custom. This can be accomplished by emergency management committing to long-term messaging and educating efforts. This would include identifying what the appropriate types of donations to be contributed; how donations are to be contributed; and where donations are to be contributed (i.e., disaster relief). Emergency management would need to alter how the media and the public perceive the effects of their donations, positive and negative, on relief operations which may expedite or delay aid to survivors. Long-term educational efforts are needed to transform the perceptions and behaviors of donors in response to disasters. The process of macro-level cognitive behavior modification would take significant effort to implement. However, through consistent messaging, emergency management can control informal material convergence behavior over time.

It is my opinion that this collective macro-level paradigm shift in post-disaster thought and action can be accomplished through consistent hazard awareness messaging and societal reinforcement. Messaging would need to be persuasive using social-psychological themed

messages, repeated extensively over longitudinal exposure. Secondary protocols would also need to be enacted, such as monitoring communication and information channels and receivers, accepting feedback from receivers, and following-up with receivers to determine if messaging is received, interpreted, and responded to in the manners intended. The use of social media and advancing technologies are new communication channels that emergency management can use to deliver messaging and ascertain messaging effectiveness in society en masse. Thus, I believe the goals of messaging should be to increase the knowledge of potential donors to make informed decisions, alter social perceptions, change social norms and roles, and to produce long-term culture change that results in the desired prosocial behaviors. Upon success, the end effect would be that emergency management controls informal material convergence behaviors and solves the preventable problem of unsolicited donations.

The purpose of this paper is to examine informal material convergence behavior through via a new analysis of amassed research, documented stories of informal material convergence behavior from the disaster literature, mass media, world-wide web, personal observation, anecdotal stories, and personal experience. Specifically, the goals of the present paper are: a) to gain a better understanding of informal material convergence behavior by identifying what problems are associated with it, what conditions favor its emergence, why individuals engage in it, why it is important to control, and how it impacts emergency management and disaster relief activities; b) to examine and analyze the actions emergency management has taken to control informal material convergence behavior; c) to recommend a social-psychological approach to control and minimize the effects of informal material convergence behavior; and d) to suggest research opportunities to bridge informational and knowledge gaps regarding informal material convergence behavior that exist in the disaster literature and in practice.

Gift Horses: Advantages and Disadvantages of Unsolicited Donations

Informal material convergence behavior has both advantages and disadvantages for emergency management. Holguin-Veras et al. (2007) called material convergence (i.e., not distinguishing between formal and informal material convergence behavior) both a “blessing and a curse” and not “an entirely positive or a negative phenomenon” (ps. 24-25). The advantages are that the influx of material donations can increase the amount of resources available for meeting needs (Lindell, et al., 2006; Wachtendorf et al., 2010). Material donations may provide quick and immediate assistance (Kendra and Wachtendorf, 2002). Material donations can increase resource reserves, plug planning gaps, and decrease potential shortages (Wachtendorf et al., 2010). Material donations may increase flexibility in dynamic and fluid situations (Kendra and Wachtendorf, 2002). And the arrival of material donations can increase survivors’ morale (Fritz and Mathewson, 1957; Lindell et al., 2006).

Informal material convergence behavior has definite advantages for disaster relief activities. So the question is posed, why should emergency management ignore all the benefits that informal material convergence behavior provides and *look the gift horse in the mouth?* Virgil (19 B.C.) cautioned others to be wary of gift horses in the *Aeneid*, “Equo ne credite, Teucrici! Quidquid id est, timeo Danaos et dona ferentis” (p. 49). In English this is translated to mean: “Do not trust the horse, Trojans. Whatever it is, I fear the Greeks even when they bring gifts” (Mackail, 1950). Virgil reinterpreted in the context of this paper, beware of free gifts as the cost of accepting them often comes at too high a price, or free gifts have hidden costs.

Informal material convergence behavior and unsolicited donations have significant disadvantages for emergency management that causes extensive problems unforeseen by donors (Fritz and Mathewson, 1957; Auf der Heide, 2003). First, material donations are frequently

contributed in overabundant quantities that habitually cause administrative and logistical issues that complicate disaster relief activities (Fritz and Mathewson, 1957; Fritz, 1961; Faulkner et al., 1989; Neal, 1994; Dynes, 1994; FEMA, 2003; Destro and Holguín-Veras, 2010). Material donations often arrive in sudden influxes that overwhelm donations managers who are may be ill-prepared to cope with high volumes of unsolicited donations (Fritz and Mathewson, 1957; Neal, 1994; Dynes, 1994; Auf der Heide, 2004). Barton (1969) called this donation invasion a “mass assault” on disaster-impacted communities. Superfluous donations require additional warehouse space, transportation, distribution facilities, labor, and/or disposal sites that often are not be available for processing large quantities of unsolicited donations (FEMA, 1999a). The acquisition of supplementary resources to manage unsolicited donations often is not accounted for in disaster planning (Fritz and Mathewson, 1957; Neal, 1994). Excessive donations are a liability; they incapacitate logistical distribution channels delaying disaster assistance (Fritz and Mathewson, 1957; Neal, 1994; McEntire, 1997; FEMA, 1999a; Auf der Heide, 2004; Destro and Holguín-Veras, 2010).

Second, material donations are provided with no specific target for contributions (Kim, 2004). Third, the need for material donations is not verified before being sent (Auf der Heide, 2003). As a result of points two and three, Holguin-Veras (2011) estimated that 90% to 98% unsolicited donations are wasted and destroyed because they are sent to inappropriate sites for proper distribution. And fourth, material donations often are made based upon what resources donors have readily available in households to contribute and not on what resources are needed (Auf der Heide, 2004). Most unsolicited donations are secondhand and of poor quality; most are superfluous and arrive in excessive quantities (Dynes, 1994; Neal, 1994; Auf der Heide, 2003). Examples of inappropriate material donations that donors often provide include: secondhand

clothing, irregularly sized, in poor condition, mismatched items, and/or climatically unsuitable; food, canned and unlabeled, perishable, expired, and/or culturally inappropriate; and medicines, beauty, and hygiene products, unlabeled, and expired (Fritz and Mathewson, 1957; Fritz, 1961; Neal, 1994; Noji and Toole, 1997; FEMA, 1999a).

Donations Management: Managing Unsolicited Donations

Disaster researchers and media have dubbed unsolicited donations as “the second disaster” (Hogland, 2007; Phillips 2009; Saavedra, 2010) due to the negative effects that informal material convergence behavior has on disaster relief activities. *Donations management* is the strategic process developed to manage unsolicited donations received after disasters. Donations management is defined as the capability to efficiently and effectively cope with the arrival, processing, and distribution of unsolicited material donations (FEMA, 2003). Donations management is designed to orchestrate efforts between public, private, and nonprofit sectors to manage unsolicited donations throughout the disaster lifecycle (FEMA, 2003). The goals are to effectively use existing and material donations; honor donor intent when possible; process and distribute donations in a timely manner; avoid damage, duplication, waste, abuse; and, demonstrate a fair and balanced allocation of resources (FEMA, 1999a; FEMA, 2005a; FEMA, 2008b). Material donations deemed useful and in good condition often are distributed as needed to disaster survivors. However donations received in poor condition, excessive quantities, and inappropriate and/or functionally useless are typically destroyed (FEMA, 1999a; Neal, 1994).

Disaster-impacted municipalities frequently contract nonprofit organizations to operate their donation management activities (FEMA, 1999b). Nonprofit organizations such as the Adventist Community Services (est. 1879), the American Red Cross (est. 1882), and the Salvation Army (est. 1880) each have more than a century of experience managing donations.

Most nonprofit organizations have strict policies regarding what donations are requested, accepted, and refused for disaster relief activities (Kim, 2006; Regalbuto, 2010). Some nonprofit organizations have long-standing policies that stipulate financial contributions only for disaster relief (Regalbuto, 2010). Donations policies help nonprofit organizations control what types of donations are accepted and reduce the amounts of unsolicited donations that are received after disasters. When these policies are enforced, they can reduce waste, redundancy, and the amount of financial and personnel resources needed to manage donations (FEMA, 2008b). Since unsolicited donations are not accepted, there are fewer resources expended and little or no management required. However, as nonprofit organizations attempt to control the types of donations that are received and managed for disaster relief over the last century, a review of the disaster literature indicates that nonprofits and emergency management have struggled to manage unsolicited donations received after disasters.

In Chapter Two, the most prominent disaster literature associated with the historical impacts of informal material convergence behavior and unsolicited donations on disaster relief is reviewed. In Chapter Three, three current strategies designed to manage and reduce informal material convergence behavior are identified and analyzed. In Chapter Four, social-psychological research is examined to determine what motivational factors influence donors' decisions to make charitable contributions and how this information can be used to formulate hazard awareness messaging. And Chapter Five is the summary review and conclusion section in which two challenges for emergency management to successfully disseminate hazard awareness messaging are identified, four recommendations are made to accomplish the positive cognitive behavioral modification that messaging is intended to affect, and future research topics for closing existing knowledge gaps regarding informal material convergence behavior are suggested.

CHAPTER TWO. HISTORICAL IMPACTS OF INFORMAL MATERIAL CONVERGENCE BEHAVIOR ON DISASTER RELIEF ACTIVITIES

Since the identification of convergence behavior in the early 20th Century, there have been many papers in the disaster literature that have focused on personal and informational convergence (see NORC, 1954; Fritz and Mathewson, 1957; Fritz, 1961; Barton, 1969; Scanlon, 1992; Kendra and Wachtendorf, 2002; Kendra and Wachtendorf, 2003; Auf der Heide 2003; Wachtendorf and Kendra, 2004; Palen and Lui, 2007; Lui et al., 2008; Palen et al., 2008; Hughes et al. 2008; Subba and Tung, 2010). There have only been a few papers that have focused entirely on material convergence behavior, Neal (1994), Holguín-Veras et al. (2007), Destro and Holguín-Veras (2010), and Wachtendorf et al. (2010). In Chapter Two, the literature focusing on material convergence behavior is briefly discussed. Historical examples are used to emphasize the major issues and impacts that informal material convergence behavior has had upon emergency management and disaster relief activities.

History of Informal Material Convergence Behavior after Disasters

One of the earliest and best documented examples of informal material convergence behavior occurred after the 1917 Halifax Disaster (Nova Scotia Canada). Johnstone (1919) and Prince (1920) recorded disaster response efforts to the fiery explosions of two ships, one full of high powered explosive powder, in Halifax harbor. The explosions of these ships resulted in over 2,000 deaths and damaged most of the port town (Scanlon, 1992; Scanlon, 2002). According to Prince (1920), the Salvation Army managed the distribution of unsolicited donations and hastily distributed resources to disaster survivors without assessing the quality and/or usefulness of the resources. However informal material convergence behavior was so problematic that Halifax's

Citizens Relief Committee appealed directly to donors that they should contact them before sending any future donations (Johnstone, 1919; Prince, 1920; Scanlon, 1992; Scanlon, 2002).

Johnstone (1919 p.123) reported the following:

So great was the outpouring of assistance, personal and material, including that from the United States... that the administrative situation in Halifax became extremely strained. The congestion swamped the workers and added temporarily to the difficulties of the situations. Accordingly, the Relief Committee on December 12 requested that no more volunteer helpers come to Halifax without communicating with them and that the parties desiring to donate supplies first notify the Committee of the character and quality of the goods offered. In this way the congestion was relieved.

Prince (1920) compared Halifax's informal material convergence problems with those experienced after the 1900 Galveston (Texas) hurricane and 1906 San Francisco (California) earthquake and fire. The American Red Cross and Salvation Army had tremendous difficulty managing excessive and useless unsolicited donations received after those disasters. Similar to the Halifax disaster, these nonprofit organizations determined that unsolicited donations were inappropriate and insufficient to meet survivor needs (FEMA, 1999a). In discussing these disasters, neither Johnstone (1919) nor Prince (1920) specifically used the term *convergence*; however, both writers recognized and identified similar behaviors. Both authors documented three forms of *post-disaster* convergence (i.e., movements of people, information, and materials after disasters occur). Johnstone identified a fourth form of convergence, *pre-disaster* (i.e., movements of people, information, and materials before disasters occur) (Scanlon, 1992).

In the 1950's, NORC (1954) and Fritz and Mathewson (1957) also investigated the yet unnamed, however, increasingly identifiable convergence phenomena. Fritz and Mathewson followed NORC's earlier work and completed a seminal treatment of the newly coined behavior, *convergence behavior* (Kendra and Wachtendorf, 2002). Fritz and Mathewson identified and termed three post-disaster convergence forms, *personal*, *informational*, and *material*, and divided them into two types, *formal* and *informal*. The researchers focused on informal convergence because they believed informal was the most problematic for emergency management. They identified that individual spatial proximity to disaster sites was a strong factor in the form of convergence behavior that was exhibited. The authors revealed that converging individuals close to disaster sites are more likely to go to sites rather than make donations, and conversely, those further away are more likely to send material donations than go in person. However they also determined there are proximal limits that individuals would send material donations; as distances increased from disaster sites, material donations decreased. The decreases in material donations over greater distances were attributed to the increasing costs associated with shipping freight.

Fritz and Mathewson (1957 p.23) summarized two major problems with informal material convergence behavior, excessive quantities and donation uselessness, in the following narrative provided by a representative from the American Red Cross after the 1952 White County, Arkansas tornado:

So much that was worthless rags. They had some pretty good ones. Somebody sent an old doggone big carton of falsies. We got a tuxedo, a nice one; it was in good condition. High button shoes to derby hats. No work clothes to speak of. We had some brand new stuff --some suits that I would have liked to have had... but there was this vast accumulation of stuff that wasn't worth the transportation and

maybe it came from Pennsylvania or Kansas or from a long distance at great expense. The fault is that we never had any experience with anything on as big a scale and we weren't expecting any carload lots --and that's the way it came in. Maybe three, four, five of these great big moving vans and loaded to the ceilings. We'd open the doors and it just fell out. And a great percentage of it was unsorted--just thrown together.

Fritz and Mathewson (1957) found similar problems with informal material convergence behavior that Prince (1920) documented after the Halifax 1917 disaster. The researchers recorded inconsistent management and indiscriminate distributions of unsolicited donations. Fritz and Mathewson suggested developing donation clearinghouses for donations managers to administer donation requests and distribution; this is one of the first documented instances for the creation of a national donations management system. The authors believed the major factors triggering informal material convergence behavior were mass media disaster coverage and the media's haphazard public appeals for donations. The researchers stressed that media was not the proper agent for making public appeals; once appeals are made emergency management loses control of messaging. Fritz and Mathewson recommended delaying the release of official media information until accurate information was gathered; then releasing information that would effectively control the influx of donated resources for disaster relief activities.

Neal (1994) thoroughly documented informal material convergence behavior after the 1992 Hurricane Andrew. He reported that excessive amounts of secondhand clothes, canned and perishable foods, and used household supplies arrived in abundance in south Florida. For a time, semi-trucks loaded with millions of tons of material donations arrived daily and contributed to existing logistical and distribution problems. He contended that excessive unsolicited donations

led to ineffective use of resources; wasting donations, space, personnel, time, vehicles, and energy. The result was a public relations nightmare for emergency management. The Red Cross and Salvation Army made public appeals for additional monetary donations at the same time the media broadcast images of material donations rotting, burning, or dumped at landfills. Thus, Neal argued that donors receive mixed messages when nonprofit organizations reject material donations yet request monetary donations. Overall he concluded that unsolicited donations had severely disrupted the Hurricane Andrew emergency response and recovery activities.

Disaster researchers Holguín-Veras et al. (2007), Destro and Holguín-Veras (2010), and Wachtendorf et al. (2010) studied different aspects of formal and informal material convergence behavior after the 2005 Hurricane Katrina. The Holguín-Veras et al. (2007) paper focused on logistical issues that inhibited disaster relief activities. The authors identified eight factors as logistical points of failure that impacted the Katrina response, these included: event magnitude, communication infrastructure collapse, understaffed and insufficient training, no integration between Federal and State/Tribal logistics systems, lack of sufficient resource prepositioning, ineffective donations management strategies, resource procurement, and limited asset visibility (p. 78-81). Holguín-Veras et al. (2007) recommended the following mechanisms to improve logistical responses for future disasters: increase asset visibility, improve donations management strategies, develop comprehensive logistics training programs, national emergency logistics networks, regional purchasing agreements, and regional agreements for prepositioning resources (p. 81-82). The authors concluded the Katrina response was a logistics fiasco due in large part to informal material convergence behavior and no pre-planning by emergency management to handle the massive influx of unsolicited donations.

The Destro and Holguín-Veras (2010) paper focused on modeled donation patterns to ascertain how donor's socioeconomic characteristics affected their donations to disaster relief activities. They indicated there were positive relationships between donor's socioeconomic characteristics and their giving patterns. The positive relationships correlated with income (i.e., high income and wealth), employment status (i.e., employed), education status (i.e., greater attainment), marital status (i.e., married), and household density effect. They also implied that the donor's spatial proximity to disaster sites affects the types and amounts of financial contributions and material donations. Similar to Fritz and Mathewson (1957) findings, Destro and Holguín-Veras (2010) identified that individuals in greater proximity to disaster sites preferred to contribute material donations; conversely, as distances increased from disaster sites, individuals preferred to send financial contributions. The authors asserted that shipping and transportation costs often precluded individuals from sending material donations across great distances into disaster-impacted communities.

The Wachtendorf et al. (2010) paper investigated how catastrophes created unique social conditions that impacted the manner in which formal and informal material convergence behavior emerged and how it was managed. They used Quarantelli's (2006) six catastrophe characteristics after the Hurricane Katrina disaster to illustrate how large-scale events of intense magnitudes and scopes contributed to informal material convergence and directly affected logistics of donated resources arriving into disaster-impacted areas. Quarantelli (2006) identified six characteristics that often emerge after catastrophes occur:

- 1) most or all of the community built structure is heavily impacted;
- 2) local officials are unable to undertake their usual work role, and this often extends into the recovery period;
- 3) help from nearby communities cannot be provided;
- 4)

most, if not all, of the everyday community functions are sharply and concurrently interrupted; 5) the mass media system especially in recent times socially constructs catastrophes even more than they do disasters; and 6) because of the previous five processes, the political arena becomes even more important.

Wachtendorf et al. (2010) indicated that Hurricane Katrina and the cascading effects negatively impacted community structures, infrastructures, facilities, and homes. The impacts created disruptive effects on emergency distribution systems; damaged pre-positioned supplies; affected finding alternative operational spaces, affected sheltering displaced persons; affected safely storing disaster resources and material donations; and damaged communication infrastructures making communications difficult and impossible at times. Local officials and personnel needed for emergency response and recovery efforts were also impacted and were unable to fulfill their duties to normal capacities; outside agencies and personnel were relied upon heavily to perform those roles and fill gaps. Due to the magnitude and scope of Hurricane Katrina, neighboring states and communities could not effectively honor pre-established agreements for emergency assistance and this problem profoundly affected distribution systems and response times in and around disaster-impacted areas. Extensive infrastructure problems disrupted routine operations and distribution systems requiring nonprofit organizations to improvise and use adaptive strategies to deliver and receive resources (e.g., distributors eliminated warehousing and directly delivered resources to agencies). Media coverage and those requesting donations strongly affected the types and amounts of donations received. In many cases, the local officials acted in self-serving manners and overemphasized resources needed for their districts determining which areas received disaster aid first.

Wachtendorf et al. (2010) identified a seventh catastrophe characteristic: mass and extended out-migration of residents (i.e., displaced persons and evacuees) outside of the disaster-impacted areas. They discovered that the emergency resource distribution extended far beyond the disaster-impacted areas and external communities that harbored evacuees and survivors. While disaster aid made its way to evacuees/survivors in their new locations, researchers found that unsolicited donations still arrived into disaster-impacted communities, many abandoned, long after residents evacuated. Wachtendorf et al. (2010) concluded that the emergence of these seven characteristics presented unique social conditions and challenges to manage formal and informal material convergence behavior.

In summary, the limited literature on informal material convergence behavior suggests that such behaviors have been observed after most major disasters since the early 20th Century. The phenomenon's seemingly inevitable reoccurrences dramatically escalates with increased disaster magnitude and the amount of media attention. Disaster research on this topic has lagged considerably on informal material convergence behavior given the significant negative impacts that this behavior has on emergency management (Destro and Holguín-Veras, 2010). Until recently there has been a substantial knowledge gap with respect to the impacts that informal material convergence has on large-scale disasters.

The phenomenon has also been documented in the catastrophe Hurricane Katrina. Neal (1994) and Wachtendorf et al. (2010) discovered that catastrophic disasters created unique physical and social conditions favorable for informal material convergence behavior. Recent research on material convergence behavior after Hurricane Katrina (Destro and Holguín-Veras, 2010; Wachtendorf et al., 2010) indicates informal material convergence has significant negative

effects on disaster relief activities. The focus of the next section is on how informal material convergence behavior negatively impacts emergency management.

Reoccurring Themes of Informal Material Convergence Behavior after Disasters

Eight reoccurring themes identified from the disaster literature are presented to exemplify how informal material convergence behavior negatively affects disaster relief. The purpose of this section is to graphically illustrate in a historic context the challenges that emergency management encounters when managing unsolicited donations after disasters.

Fritz and Mathewson (1957) identified six of these eight themes. These authors believed the full extent of informal material convergence experienced after disasters is not quantitatively expressed in most disaster reports. The first six themes extrapolated from disaster data indicate that unsolicited donations (1957 ps. 22-23):

(1) normally arrive in volumes far in excess of the actual needs; (2) in large proportion, are comprised of unneeded and unusable materials; (3) require the services of large numbers of personnel and facilities which could be used for more essential tasks and functions; (4) often cause conflict relations among relief agencies or among various segments of the population; (5) materially add to the problem of congestion in and near the disaster area; and (6) in some cases, may be disruptive to the local economy.

Subsequent disaster researchers identified two additional themes: (7) potential health threats to disaster survivors and disaster relief workers and (8) potential threats to natural and urban environments (Neal, 1994; Kendra and Wachtendorf, 2002). These eight themes are discussed in the narrative below.

1). Quantities Far Exceed Needs

Unsolicited donations often arrive in quantities that far exceeded actual needs (Dynes, 1970). In turn, excessive material donations disrupt disaster relief activities (Prince, 1920; Fritz and Mathewson, 1957; Fritz 1961; Barton, 1969; Dynes, 1970; Scanlon, 1992; Dynes, 1994; Neal, 1994; Kendra and Wachtendorf, 2002; McEntire et al., 2003; Auf der Heide, 2004; Wachtendorf et al., 2010). Fritz and Mathewson (1957) described unsolicited donations as a “deluge” of material resources that “flood” disaster-impacted areas, hospitals, and disaster relief centers. Fritz and Mathewson (1957 p. 25) detailed the inundation of unsolicited donations after the 1953 Waco, Texas tornado:

The flood of donated supplies and equipment coming into Waco early provided a problem, because no provision had been made for a central place in which such material could be received and from which it could be dispatched to the points needed...No value was estimated for clothing since appeals had brought such a staggering response that workers were almost crowded out of the building. A full month after the tornado shipments of clothing were still arriving for use by the Salvation Army.

Neal (1994) provided superlative examples of excessive unsolicited donations after Hurricane Andrew. He reported that too much assistance, primarily in the forms of secondhand clothing, canned food, and household supplies has extreme negative consequences on disaster relief activities. He said that millions of tons of unwanted material donations thwarted logistical and distribution operations in south Florida for several months after the hurricane. He indicated that managing large quantities of unsolicited donations stretches the capacities of emergency management to their breaking point (Neal, 1994).

2). Most Material Donations are Unneeded and Unusable

Frequently the quality of material donations was secondhand, subpar, or poor; unsolicited donations often were unsuitable, inappropriate, and unusable for disaster survivors (Fritz and Mathewson, 1957; Dynes, 1994; Neal, 1994; Auf der Heide, 2004). Donation types, qualities, and quantities often depended upon what donors had available in households and not what resources were actually needed (Auf der Heide, 2004). Neal (1994 p. 25) provided the following narrative from a Salvation Army representative regarding the usefulness of material donations received after 1992 Hurricane Andrew:

Clothing, there is too much. What you've got to know, we have got a tremendous amount of non-usable clothing. It's not that anybody has dumped on the agencies. It's all sent in clear conscious, clear compassion, but I imagine if you took all the heavy winter coats, you could fill 25 warehouses in the Miami areas – Coats that in a lifetime would never be worn in Miami.

Secondhand clothing was considered the worst donation for disaster survivors due to the enormous costs associated with storing, cleaning, repackaging, shipping, and dispensing them (FEMA, 2007; Saavedra, 2010). Nonprofit organizations considered secondhand clothing to be the most common and most inappropriate donation to contribute for disaster survivors (Kim, 2004). Secondhand clothing donations were typically low quality, inappropriate, mismatched, damaged, dirty, soiled, or entirely useless (Fritz and Mathewson, 1957; Fritz, 1961; Dynes, 1994; Neal, 1994; Auf der Heide, 2004). Kim (2006) reported that donations of secondhand clothing were often refused by nonprofit organizations. However, most unsolicited donations, including used clothing were discarded and/or destroyed (FEMA, 2007; Saavedra, 2010). Holguin-Veras (2011) estimated that 90% to 98% of all unsolicited donations were destroyed.

The destruction of unsolicited donations often had serious unintended repercussions for emergency management. Donations management for Hurricane Andrew was widely considered a public relations nightmare (Neal, 1994). Although much of the excessive donations were considered unusable for meeting survivor needs, it was seen as politically incorrect to dispose of them. The media created public controversy by reporting that surplus material donations were burned or disposed of at landfills (Neal, 1994). The disposition of excessive donation generated critical publicity and negative backlash for emergency management (Neal, 1994; Ekici, 2009).

3). Additional Resources are Needed to Manage Unsolicited Donations

Unsolicited donations frequently strained and/or exceeded the capacities of local governments and required additional outside resources to manage them (Fritz and Mathewson, 1957; Neal, 1994; FEMA, 1999a). Fritz and Mathewson (1957 p. 23) documented this issue in the following narrative from an American Red Cross representative after the 1952 White County, Arkansas tornado:

By Saturday afternoon / the day following the tornado / all this clothing and food and all this vast store of supplies started moving into Searcy for distribution to the tornado areas. And most surely 90 percent of it came to Searcy rather than any of the other areas in the state because this / general area / was the hardest hit. But that created an enormous problem. There was no place to put it at Judsonia / the most devastated town. No buildings to put it in. No buildings had been made available at Bald Knob for it. So we had to warehouse it and sort it and handle it here. That created a big problem. We had quite a few headaches.

Supplemental regional resources used for unsolicited donations were often stretched beyond capacity when large-scale disasters occur over widespread geographic areas. After

Hurricane Hugo, a massive incursion of unsolicited donations into South Carolina necessitated the acquisition of additional warehouse space, labor, and transportation causing significant problems (FEMA, 1999a). Locating adequate and undamaged warehouse space for unsolicited donations is often difficult after disasters. Neal (1994 p. 27) reported that too many resources were spent managing unsolicited donations when those resources were needed elsewhere:

For example, Red Cross personnel had to spend time locating extra storage space.

Once they located space, volunteers spent time and energy unloading the extra supplies. Overall, the extra unrequested donations usurped resources such as time and people in the initial distribution and delivery process.

Unsolicited donations can be returned to donors. During the 1997 Red River of the North flood, a 747 jet packed with 19 containers of unsorted secondhand clothes, canned food, and tools were sent to Grand Forks, North Dakota from donors in Minneapolis, Minnesota. However there were no personnel, resources, or places available to process unsolicited donations in the immediate area; the jet and all its contents were shipped back to Minneapolis (Kim, 2004).

4). Arrival Causes Conflict

Unsolicited donations often create conflicts between emergency management and donors (Prince, 1920; Fritz and Mathewson, 1957; Neal, 1994; Kendra and Wachtendorf, 2002).

Conflicts included: disaster authority/leadership, uncooperative nonprofit organizations competing for resources, special interest groups' influence, media coverage, lack of consensus, non-synchronized goals, and value of unsolicited donations (Prince, 1920; Fritz and Mathewson, 1957; Dynes, 1970). After The 1917 Halifax Disaster Prince (1920 p. 84) documented:

There was also at times lack of cooperation among the official committees themselves. Friction and crises arose from time to time, which were only stopped

short of scandal. They were the consequence either of assumption of authority upon the part of the under-committees, of ineffectiveness of leadership, or of unfamiliarity with the principles of relief.

After the September 11, 2001 terrorist attacks in New York City, donors contributed large amounts of food and supplies to disaster workers at the World Trade Center (Kendra and Wachtendorf, 2002). Kendra and Wachtendorf (2002 p. 13) documented conflicts over the spontaneous distribution of donated food around the disaster area; the donations were dubbed *rebel food* and *renegade supplies*:

Soon after the attack, a well-known steakhouse chain set up a barbecue near the disaster site, an act which offended some of the firefighters. In particular, an Urban Search and Rescue official bitterly condemned the barbecue at a staff meeting, calling the “back-yard barbecue” atmosphere disrespectful to the gravity of the situation and to the survivors. In contrast, some rescue workers appreciated the variation in diet the barbeque introduced. This episode of volunteerism heightened tensions between those who found the delivery of the food inappropriate and others who desired the continued presence of the restaurant.

5). Adds to Logistical and Congestion Problems

Unsolicited donations frequently cause serious traffic congestion in disaster-impacted areas (Fritz and Mathewson, 1957). Vehicles delivering unsolicited donations can obstruct available roadways, impede official travel and emergency access, overwhelm distribution channels, and create severe logistical problems (Neal, 1994; FEMA, 1999a; Kim, 2004; Holguín-Veras et al., 2007). “In an effort to control and organize the relief effort, authorities attempted to stop unauthorized vehicles laden with donations. Yet the convergence of unannounced and

unplanned delivery trucks strained an already overburdened highway system” (Neal, 1994 p.27)

Neal (1994 p. 25) also reported that transporting unsolicited donations created serious logistical issues after Hurricane Andrew:

Often, truck drivers with loads of clothes drove straight to severely damaged areas. Sometimes intentionally, other times by accident, they bypassed the formal warehouses outside the disaster area. Upon arrival, they often did not know where to deliver the donated clothes, so they unloaded them on the side of the road.

6). Disrupts Local Economies of Recovering Communities

Unsolicited donations regularly disrupt local economies in disaster-impacted areas. The distribution of donated clothing, food, and medicine often impede commerce and harm the local economy. Saavedra (2010) reported that the arrival of formal and informal donations after the 2010 Haiti earthquake created significant problems for the nation’s economy. Haiti’s government formally requested that the United States eliminate its large-scale food assistance and free health care programs because free food lowered market/trade prices and local farmers were unable to sell food they grew (Attkisson, 2010). Haiti requested that financial contributions be made instead of material donations to help stimulate the national and the local economies (Saavedra, 2010). Saavedra (2010 p. 1) provided the following example:

... food donations come with the same problems as clothing. He explained that food is particularly expensive to ship and faces the same problems as donated clothing – shipping and storage costs, customs issues, the effect on local businesses – as well as additional taxes.

7). and 8). Pose Potential Health Threats to People and the Environment

Unsolicited donations can pose potential health hazards for disaster workers processing donations and survivors receiving them (Fritz and Mathewson, 1957; Friedsam, 1957; Neal, 1994; Kendra and Wachtendorf, 2002). Fritz and Mathewson (1957 p. 23) reported an account from an American Red Cross representative regarding health concerns from material donation after the 1952 White County, Arkansas tornado:

A lot of it was unfit for use-- condemned by state health authorities. Unsanitary old mattresses full of bed bugs and torn up and soiled. As bad as folks needed mattresses, they couldn't be permitted to use those things. Well, when some of that stuff was hauled out and burned . . . there were rumors about how we were handling donated clothing; but it was done because it had to be done, so the State Board of Health said.

Kendra and Wachtendorf (2002) suggested that unsolicited donations could be hazardous, sabotaged, poisoned or contaminated. After the September 11, 2001 terrorist attacks on New York City, concerns arose that material donations arriving at Ground Zero could be poisoned and/or contaminated with biological or chemical agents (Kendra and Wachtendorf, 2002). Local officials were concerned that donated food could be hazardous to workers health; food prepared and left outside in unsanitary conditions may be contaminated with hazardous debris, biological and/or chemical agents (Kendra and Wachtendorf, 2002). Kendra and Wachtendorf (2002 p. 14-15) provided the following example that disaster workers are at risk to health and safety for accepting donated food:

Could there be biological warfare agents, or poison, in the food? One public official expressed concern about a basket full of carefully zip-locked bags of

chocolate chip cookies with notes from children thanking those involved in the response. Although he appreciated the donation and the accompanying sentiment, he questioned how one could be sure that the cookies were not, in fact, laced with a dangerous substance. In a separate incident, the driver of a Sheriff's vehicle... remarked that eating food given out on the street by passers-by was not normally prudent, and particularly not so after September 11th.

Unsolicited donations can pose potential threats to natural ecosystems and urban environments. Material donations, that receive prolonged exposure to adverse weather and climatic conditions, can deteriorate; toxins and hazardous materials can begin to breakdown and may leach out, which may pollute the environment. After Hurricane Andrew, numerous amounts of unsolicited donations were stored outside in the semi-tropical, south Florida environment due to the unavailability of warehouse space; most of these donations rotted from excessive exposure to sunlight, high temperatures, humidity, and precipitation (Neal, 1994). Neal (1994 p. 25) also reported that unsolicited donations were improperly disposed at landfills and leaked toxins into natural ecosystems:

The heat and usual afternoon rains, quickly turned the piles into heaps of stinking, rotting cloth. Due to the smell and potential health hazard, local authorities used city work crews and the military to gather and dispose of the clothes. A rag company assisted by gathering excessive clothing which had not yet rotted. Thus, the donated clothes created a health hazard, took volunteers and city workers away from other important disaster tasks, further increased traffic around the disaster area, and exacerbated a large waste disposal problem in Southern Florida.

In summary, informal material convergence behavior historically is a significant problem for emergency management. Disaster researchers have documented that unsolicited donations have tangible negative impacts on disaster relief activities. To counteract these negative impacts, emergency management has devised and tested numerous strategies to control informal material convergence behavior and to reduce the amounts of unsolicited donations received. In Chapter Three, the three most prominent strategies that emergency management has used to control informal material convergence behavior from the early 20th Century to the present are analyzed.

CHAPTER THREE. CURRENT STRATEGIES USED TO CONTROL INFORMAL MATERIAL CONVERGENCE BEHAVIOR AND UNSOLICITED DONATIONS

Planning to manage and control informal material convergence behavior is not a high priority for emergency management. Fritz and Mathewson (1957) indicated that emergency management consistently failed to adequately plan and prepare for unsolicited donations after disasters. Coordinating donations management activities between public, private, and nonprofit sector entities is challenging. In the past, nonprofit organizations vied against one another for limited resources. This competition was “a direct consequence of material convergence” (Holguín-Veras et al., 2010, p. 4). Public, private, and nonprofit sector entities have different mission functions in disasters. At one time they viewed their roles and responsibilities as separate and distinct from one another and often did not coordinate disaster assistance. Lack of coordinated planning efforts between public, private, and nonprofit sector entities frequently leads to “post-disaster improvisations” to manage unsolicited donations (Fritz and Mathewson, 1957, p. 61). In the 1970s, public and nonprofit sector entities began to better harmonize disaster relief planning, goals, and activities after the formation of National Voluntary Organizations Active in Disasters (NVOAD) in 1970 and the Federal Emergency Management Agency (FEMA) in 1979. However donations management problems continued to persist across sectors; informal material convergence behavior and unsolicited donations became more pronounced after Hurricanes Hugo (1989) and Andrew (1992). Mounting public, media, and political pressure forced emergency management to focus more attention on donations management. In response, emergency management developed plans and strategies to improve donations

management, limit informal material convergence behavior, and reduce the amount of unsolicited donations experienced after disasters (Tierney et al., 2001).

Three major strategies emerged for emergency management to manage and/or reduce informal material convergence behavior. First, Federal actions were developed for emergency management to coordinate donations management activities across public, private, and nonprofit sectors. Second, donations policies were established to increase financial contributions and decrease unsolicited donations for disaster relief activities. And third, new forums and alternative outlets were created for donors to contribute material donations for disaster relief activities.

Strategy One: Federal Actions to Coordinate Donations Management Activities

The first strategy is to increase the involvement of the Federal government and the usage of laws, regulations, and strategies. The Federal perspective is that national-based structures and strategies foster greater coordination and synchronization (i.e., donations management activities) across sectors. Overall, the goals are to reduce and eliminate unsolicited donations contributed and managed after disasters and to provide consistent guidance and support mechanisms to increase coordination of donations management activities for unsolicited donations that are contributed and do need to be managed.

The Federal government through legislation, such as the *Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988*, the *National Response Framework*, and the *National Donations Management Strategy*, has defined and helped clarify the roles, authorities, and responsibilities that public, private, and nonprofit sector entities have for donations management throughout the disaster lifecycle. Specifically, in 1993 FEMA and other Federal departments, such as State, Defense, Transportation, and General Services Administration with representatives of state/local governments and nonprofit organizations formed the *National*

Donations Steering Committee to coordinate unsolicited donations (FEMA, 1999a). The Steering Committee developed the *National Donations Management Strategy* (NDMS). The NDMS was intended to provide guidance for donations managers to work together to standardize donations management practices across sectors (FEMA, 1999a; MNHSMN, 2002). From the NDMS, guidance was provided to reduce unsolicited donations.

The Steering Committee created *Initial 10 Key Elements* (FEMA, 2008b) which identified seven actions crucial to the reduction of contributions of unsolicited donations and to improve managing donations received. First, promote financial contributions for disaster relief activities; monetary donations are more useful than unsolicited donations. Second, use existing donations management structures and capacities. Third, provide team-oriented approaches across sectors to improve donations management activities. Fourth, anticipate that no single entity is responsible for managing all incoming unsolicited donations. Fifth, expect state/local governments to operate donations management and to implement NDMS sections that suit their needs; Federal government and nonprofit organizations act strictly in support roles to state/local governments. Sixth, disseminate disaster information to the public to help control informal material convergence behavior. And seventh, initiate donations management activities before official Federal disaster declarations and prepare to manage unsolicited donations. The Steering Committee also made provisions in the NDMS for Donations Coordination Teams (DCT) to support state/tribal and local governments coordinating donations management (MNHSMN, 2002). DCTs deploy to disasters, initiate operations, create structures for donations management, and publicize information for donating resources (FEMA, 1999a). In 2002, the NDMS was updated and renamed the *National Volunteer and Donations Management Strategy* (NVDMS) when volunteer management was added. Thus, DCTs became *Volunteer and Donations*

Management Teams with the added responsibilities of managing spontaneous and unaffiliated volunteers as well as unsolicited donations.

Congress supported the new Federal approach to emergency management in 1999 by creating 12 Emergency Support Functions (ESF) and adding them to the *Federal Response Plan* (FRP) (FEMA, 1999b; DHS, 2006). The ESFs are designed to increase Federal interagency coordination and cooperation in response to disasters (FEMA, 2008a). Specifically ESF-6, *Mass Care, Housing, and Human Services*, permits the Federal government to support disaster relief of public, private, and nonprofit sector partners (FEMA, 1999b; DHS, 2006; FEMA, 2008a). ESF-6 includes Federal support to create a national database system to record and manage donation offers, provide warehouse support for storing unsolicited donations, and coordinate unsolicited donations arriving from international sources (FEMA, 2008a).

In 2003, Congress added three ESFs to the FRP including the *Donations Management Support Annex* (DMSA) (FEMA, 2003). The DMSA assists state/tribal/local governments with additional ESF-6 guidance for donations management (FEMA, 2003). In 2004, Congress revised the FRP into the *National Response Plan* (NRP) and revised it again in 2008 into the *National Response Framework* (NRF). Congress revised the DMSA into the *Volunteer and Donations Management Support Annex* to include Federal support of state/tribal/local management efforts with unaffiliated volunteers and unsolicited donations (FEMA, 2008b).

In summary, the Federal government has created laws, frameworks, and strategies needed to control informal material convergence behavior. The Federal government has diligently worked with other public, private, and nonprofit sectors to develop mechanisms to reduce material donations contributed, received, and managed after disasters. In spite of all the Federal

actions undertaken to coordinate and streamline donations management activities across sectors, emergency management continues to receive excessive unsolicited donations after disasters.

The problem for emergency management is not with the existing Federal laws, executive orders, regulations, and strategies, but how emergency management disseminates information and communicates its policies and strategies to the media and general public. The National Donations Steering Committee identified promoting financial contributions as a strategy to reduce unsolicited donations. This strategy has not been effectively disseminated to the public in manners sufficient to create changes to social norms and appropriate prosocial responses after disasters. Emergency management has a responsibility to donors to communicate to the general public what are appropriate donations to be contributed to disaster relief activities and what donations are not acceptable. By emergency management failing to effectively convey the concept of donor responsibility to the public, this communication failure leaves donors in the position of deciding what donations are appropriate to contribute. Thus the problem further propagates and emergency management is left managing unsolicited donations. The next strategy examined to reduce informal material convergence behavior is designed to increase monetary donations and minimize contributions of unsolicited donations.

Strategy Two: Requesting and Accepting Financial Contributions Only

The second strategy is the solicitation and acceptance of financial contributions only for disaster relief activities. Many nonprofit organizations have specific donations policies for disaster relief. These policies include requesting and accepting financial contributions only and refusing or redirecting unsolicited donations to other nonprofit organizations. This donation policy is not new to donors; the American Red Cross has employed it for more than a century. After the 1906 San Francisco, California earthquake and fire, the Red Cross determined that

unsolicited donations were inappropriate and insufficient to meet the needs of disaster survivors (FEMA, 1999a). In the same year, the Salvation Army organized its first national fundraising campaign to raise money to shelter, feed, and provide supplies for earthquake survivors (SA, n.d.). The Red Cross implemented donations policies after the 1906 disaster for all future disasters that are still employed today (ARC, n.d.):

The best way to help a disaster victim is through a financial donation to the American Red Cross. Financial contributions allow the Red Cross to purchase exactly what is needed for the disaster relief operation. Monetary donations also enable the Red Cross to purchase relief supplies close to the disaster site which avoids delays and transportation costs in getting basic necessities to disaster victims. Because the affected community has generally experienced significant economic loss, purchasing relief supplies in or close to the disaster site also helps to stimulate the weakened local economy.

Emergency management is slowly moving toward adapting *the financial contributions only* policy/strategy for disaster relief. This strategy has gained traction and has begun to appear on Federal, state and local emergency management websites and in some messaging efforts. For example, FEMA promotes the concept of *donor responsibility* for contributing resources for disaster relief. Donor responsibility is the social expectation that potential donors will contribute resources that are appropriate and deemed socially acceptable according to prevailing donations strategies (i.e., new social norms for charitable giving). FEMA provides some reasons why donors are expected to contribute monetary donations to disaster relief (FEMA, n.d.):

Cash offers voluntary agencies the most flexibility in obtaining the most-needed resources and pumps money into the local economy to help businesses recover.

Remember, unsolicited donated goods such as used clothing, miscellaneous household items, and mixed or perishable foodstuffs require helping agencies to redirect valuable resources away from providing services to sort, package, transport, warehouse, and distribute items that may not meet the needs of disaster survivors.

Many nonprofit organizations use *the financial contributions only* strategy to increase monetary donations, reduce material donations, and decrease the financial resources expended to manage unsolicited donations. Thus, using this strategy helps control the types of donations that are received and managed. However, many nonprofit organizations, contracted for donations management, often accept unsolicited donations on behalf of the municipalities they represent. This is done to avoid the negative perceptions that accompany the denial of unsolicited donations for disaster survivors. Thus the problem of unsolicited donations perpetuates from disaster to disaster. This is an important reason why emergency management needs to take a unified approach to solidify donations policies and strategies across sectors. Emergency management needs to have uniform policy that defines what donations are appropriate and inappropriate to contribute for disaster relief; stand by the policies; and effectively, persuasively communicate these policies to the media and the general public.

For example, on April 27, 2011, a series of tornadoes spread across the southeastern U.S., from Mississippi, Alabama, Georgia, to North Carolina, killing more than 300 individuals in their wake. Immediately after the disaster, individuals, community groups, and businesses generously donated services, volunteered time, and contributed tons of unsolicited donations. The *Associated Press* ran a syndicated story for May 15, 2011 with a headline that read: *Tornado donations: What to do with broken toys and used underwear*. The following day, the *Dothan*

Eagle in Dothan, Alabama ran a similar headline: *Toy, clothing donations not needed for tornado victims*. The American Red Cross and Salvation Army requested financial contributions and blood donations only for these disasters. However, the *Associated Press* (2011) reported that 10 warehouses in Tuscaloosa, Alabama were completely full of unsolicited donations, too many material donations consisted of “broken toys, dirty stuffed animals and used underwear that has to be thrown in the trash.” After this recent disaster, it appears that emergency management was not successful reaching the media with their *donor responsibility* and *financial contributions only* messaging and has much more work ahead to get messaging into mainstream America.

In summary, emergency management has to move as a single entity to integrate effective donations policies into their overall donations strategies and uniformly stand-by and act upon them when requesting, accepting, receiving, and denying donations. Nonprofit organizations, through experience and wisdom, determined that financial contributions were and still are the best donations for disaster relief. Enforcing financial contributions only policies is a solid strategy to focus on increasing monetary donations contributed and decreasing unsolicited donations contributed, received, and managed. Emergency management has gradually begun to integrate this policy into strategies across sectors; now emergency management collectively needs to effectively promote these donations policies to the media and public, and strictly adhere to the policies themselves. Publicizing the necessity for financial contributions is essential to reduce informal material convergence behavior. However, there are times and circumstances in which material donations are necessary for disaster relief. The next strategy examined provides potential donors alternative forums and outlets for contributing material donations, including offering donations to recipients before contributing them and donating material items to alternate nonprofit organizations that accept unsolicited donations.

Strategy Three: National Donations Management Network and Alternative Outlets

The third strategy introduces new forums and alternative outlets for potential donors to offer and contribute material donations. One forum to offer material donations is the National Donations Management Network. This network is the national virtual warehousing system created for managing offers of material donations to public and nonprofit entities. This forum reflects the ongoing pattern of informal material convergence behavior and that this behavior in some form is likely to continue even with an increased emphasis on financial contributions. In addition, the development of this network recognizes the potential of internet technology to lessen several of the issues with unsolicited donations, the lack of coordination of such donations among donors, the need for a material allocation system to match donors with need.

Emergency management recognized the need for a national donations management system in the aftermaths of Hurricane Hugo and Hurricane Andrew. Both FEMA and NVOAD acknowledged that a standardized, sector-wide donations management system was necessary to improve the processing of material donations (Neal, 1994, McEntire, 2007). Furthermore, following Hurricane Katrina in 2005, the Federal government acknowledged that some private sector entities, United Parcel Service (UPS), Wal-Mart, and Home Depot, had greater success moving resources into Louisiana and Mississippi than the public sector (King, 2008). Moreover, the nonprofit organizations Adventist Community Services, American Red Cross, and America's Second Harvest had begun using new web-based technologies to manage monetary and material donation offers (Smith and Castillo, 2008). The Federal government, looking to improve its disaster logistics and supply-chain management, contracted with a nonprofit organization to create a virtual, national, donations management system.

In 2006, FEMA launched the National Donations Management Network (NDMN), through a grant and a cooperative agreement with The Aidmatrix Foundation Inc. (Smith and Castillo, 2008). NDMN is the national, web-based donations management system that connects private donors with public and nonprofit sector entities. Donors and recipients can coordinate donation offers for money, materials, services, and volunteers in real-time (Smith and Castillo, 2008, Aidmatrix, n.d.). NDMN is designed to manage donation offers before contributions are physically made and facilitate resource and information sharing between sectors. The purpose of NDMN is to manage donated offers (i.e., accept or decline offers) in a virtual setting; this network has the potential to replace the manual receipt and management of unsolicited donations in disaster settings (Irwin, 2010).

NDMN is user-friendly system for donors to use. Donors first register in NDMN; then donors can view and offer donations. Public entities and nonprofit organizations must be registered with NVOAD to participate in NDMN. Donors can offer donations through web-based portals. State donations coordination teams act as intermediaries to manage donation offers and allocate resources (Buller and Miller, 2009). Public entities and nonprofit organizations can *Review, Accept, and Receive* offers or take no action at all (Aidmatrix, n.d.). Donation offers do not have to be accepted.

NDMN acts as “virtual warehousing”. Donors keep resources until recipients are ready to receive them. Donors and recipients can discuss the logistics of delivering donations from one location to another (Buller and Miller, 2009). Thus, donation recipients can reduce unsolicited donations received in disaster settings by selecting only the needed resources; lessening the need to physically manage unvetted material donations.

The NDMN basic system is available to all states and territories at no charge. NDMN is funded by FEMA, and grants from The UPS Foundation, Accenture, and The Aidmatrix Foundation. In addition, customized programs are available at additional costs (Smith and Castillo, 2008). Auxiliary features include: *In-Kind Donations Management* permits states to establish virtual call centers and in-kind portals; *Unaffiliated Volunteer Management* connects volunteer offers to donations managers; *Online Relief Warehouse Management* provides real-time warehouse inventory, activity, and statuses; and, *Financial Donations Management* permits States to raise funds for disaster specific activities, promotes financial contributions, alerts donors to critical needs, and supports monetary donations plans (Smith and Castillo, 2008; Aidmatrix, n.d.). Presently (2013) more than 47 states, territories, and municipalities participate in the NDMN program (Aidmatrix, n.d.).

The faith-based nonprofit organization Adventist Community Services (ACS) offers a hybrid approach that may appeal to donors who want to have more control over how their financial donations are spent. ACS uses Aidmatrix software similar to NDMN. ACS provides donors the option to direct financial contributions toward specific disasters and/or to general funds for disaster relief activities. ACS provides donors the opportunity to select the specific resources like food bags, new clothing, cleaning supplies, personal care items, water, etcetera that their financial resources would purchase for disaster survivors (ACS.org). Thus donors have more control in how and where their financial contributions are used and spent.

Donors also have additional outlets available to them to contribute material donations. Material donations are most effective and have the greatest economic impact when donations are contributed to local charities that accept them (Dennison, 2005). Material donations to local charities eliminates transportation costs, affords the time to properly sort, clean, repair, and

identify best uses of donations, and guarantees disaster workers are not managing unsolicited donations in a disaster setting (Dennison, 2005). The Red Cross recommends that donors seek local nonprofit organizations that accept material donations and contribute those items to them (ARC, n.d.):

The American Red Cross does not accept or solicit small, individual donations of items for emergency relief purposes. Small items such as collections of food, used clothing, and shoes often must be cleaned, sorted, and repackaged which impedes the valuable resources of money, time, and personnel that are needed for other aspects of our relief operation. The Red Cross, in partnership with other agencies, suggests that the best use for those types of donations is to support needy agencies within donors' local communities.

In summary, NDMN provides donors user-friendly alternatives to offer monetary and material donations to emergency management before contributing resources. NDMN allows donors to contribute material donations, as well as monetary donations, donate services, and register volunteers for disaster relief activities. NDMN is one forum that emergency management can inform donors that specific donations are requested; donors are thus made aware and so responsible for contributing donations that are appropriate in each disaster situation.

However NDMN is limited to the extent to which it can reduce unsolicited donations following a given event. To use NDMN, donors must register with NVOAD to view and post donation offers. Thus, NDMN is geared more toward businesses with large quantities of donations to offer and to make logistical arrangements. Individuals, families, or community groups with small quantities of donations may be too intimidated to use NDMN. The effort to register, learn, and use NDMN may not appeal to too many spontaneous donors. These types of

donors may simply send their material donations off as unsolicited donations or not donate resources at all.

Current Status of Problem

The three identified strategies, when implemented correctly, have the potential to control informal material convergence behavior. Emergency management has employed these donations management strategies, donations policies, and donations technologies in hopes of resolving this reoccurring problem with unsolicited donations. In spite of emergency management's past and recent efforts, informal material convergence behavior is still a prominent problem today. If emergency management collectively adhered to the donation policies described in strategy two, monetary donations would have increased and material donations would have decreased since their inception. However, the *financial contributions only* messaging is not reaching the media and public and unsolicited donations are still contributed after disasters. Web-based technology is available for donors to offer material donations before contributing them. Nonetheless, the *use of NDMN for material donations* messaging is not well promoted, leaving most potential donors unaware that NDMN exists. Emergency management has the correct policies, strategies, forums, and tools to control informal material convergence behavior. However, through inconsistent messaging, emergency management does not take the necessary steps to persuade people to donate responsibly. Thus, emergency management perpetuates unsolicited donations from disaster to disaster. In Chapter Four, social-psychological research is examined to help determine if macro-level and micro-level factors may influence individual decision-making to contribute resources for charitable pursuits. If so, can this research be used to formulate persuasive hazard awareness messaging to control informal material convergence behavior, increase monetary donations, and reduce unsolicited donations.

CHAPTER FOUR. USING SOCIAL-PSYCHOLOGICAL RESEARCH TO MODIFY INFORMAL MATERIAL CONVERGENCE BEHAVIOR

In Chapter Four, social-psychological research is examined to demonstrate that certain motivational macro-level and micro-level factors are likely to be relevant to individual decision-making and informal material convergence behavior. If these factors are related to such decision-making and behavior, then these factors may be considered as a means to enhance hazard awareness messaging, that is, long-term educational efforts to reduce the “second disaster”. Practical ideas to promote public awareness of these issues are suggested and discussed.

Macro-Level Disaster Responses: Collective Behavioral Responses Affect Donations

There are explicit macro-level factors that affect the onset of informal material convergence behavior. Macro-level factors are large-scale phenomena that impact how individuals receive, perceive, process, and respond to external events, information, and social expectations. Macro-level factors include: *social norms*, *media influence*, and *advancing technology*. Emergency management must understand how these macro-level factors frame individuals’ perceptions of their social roles in the context of the larger community and how prevailing social norms affect what donations people contribute to disaster relief activities. These macro-level factors are discussed below.

Social Norms

Gerrig and Zimbardo (2002) defined *social norms* as “the expectation a group has for its members regarding acceptable and appropriate attitudes and behaviors.” Disasters frequently produce unique and momentary shifts in normative patterns and values in which individual pursuits are briefly suspended for collective solidarity (Barton, 1969; Dynes, 1994). Thus, this

temporary, cooperative prosocial response can create a *therapeutic* (Fritz and Mathewson, 1957) or *altruistic community* (Barton, 1969). Therapeutic and altruistic communities are relatively short times of social cohesion in which prosocial behaviors are promoted for the betterment of the whole community (Eisenberg and Mussen, 1989). Some prosocial behaviors are driven by a collective willingness to give amidst disaster survivors and community members where it is expected that community members should willingly sacrifice personal concerns for community concerns (Fritz and Mathewson, 1957; Fritz, 1961; Fritz, 1968; Boileau et al., 1979; Lindell et al., 2006). However many have questioned whether the motive of giving is pure sacrifice or accompanied by the expectation of reward as in the case of *social exchange theory* discussed further in the micro-level factors section (Batson, 1991; Piliavin and Charng, 1990; Clary et al., 1998; Batson et al., 2002; Einolf, 2010).

Social-psychological research has produced an extensive body of research on prosocial behavior (Dynes, 1994) that both confirms and expands upon research on helping norms in disasters. For example, researchers found that individuals in smaller communities were more likely to help people in need than individuals in larger communities (Aronson et al., 2004). However individuals in larger communities were expected to help others especially when it was clear that the needs of others were legitimate (Dynes, 1994) and the normative expectation to help had been made salient. For example, New York City had a tremendous community response after the September 11th terrorist attacks. Thus the emergence of temporary normative patterns (i.e., therapeutic and altruistic communities) is expected in most communities after disasters regardless of size (Fritz, 1961; Fritz, 1968; Barton, 1969; Dynes, 1994; Fischer, 1994). Dynes (1994 p. 2) labeled therapeutic and altruistic communities as *situational altruism*:

This emergence in situations when new victims have been created and there is doubt that the existing institutional resources can deal with their needs. Thus, it is a situation in which individual altruism needs to be enhanced and the institutions traditionally involved in helping activities need to be supplemented. Since these needs are newly created, the helping activity will not follow strictly previous institutionalized patterns. Traditional roles are expanded. New roles are created. Organizations are transformed. New actors, both individual and collective, assume new responsibilities for providing assistance.

Dynes (1994) believed that situational altruism would emerge after most disasters if specific social conditions were met. First, the situation/context was newly defined where individuals viewed disaster survivors as overwhelmed and circumstances required collective responses to reduce suffering. Second, normative patterns changed in which individuals viewed the lives of disasters survivors as severely disrupted and in need of help. And third, the social structure changed in ways that individuals viewed disasters as large-scale events beyond the local capacities to manage and required collective community responses to assist in recovery. Thus, normative triggers for prosocial behaviors can travel as far as the news of the event travels and increase the audience of potential helpers (i.e., those willing to send donations) beyond disaster-impacted communities. The result can be influxes of unsolicited donations from well outside locally-affected areas (Fritz, 1961; Tierney et al., 2001). Thus, media influence and coverage are important to the onset of informal material convergence behavior.

Media Influence

The mass media has significant influence on modern culture and the manner in which society receives, perceives, and responds to disaster-related information. Disasters are media

magnets that attract regional, national, and international news coverage (Wachtendorf et al., 2010). The media frames disasters within the narrative story that the media wants to tell, thereby affecting how audiences perceive disaster information (Fritz and Mathewson, 1957; Wachtendorf et al., 2010). The media's interest, attention, exposure, and appeals for material donations (Fritz and Mathewson, 1957; Dynes, 1994; ARC, n.d.) are crucial factors in the emergences of therapeutic community responses, situational altruism, and informal material convergence behavior. Oosterhof et al. (2008) reported that media exposure was a major factor that affected donors' intentions and decisions to make charitable contributions. Thus the media, through the amount of attention and exposure a disaster receives, affect the types of donations, quantities, places, and times material donations are contributed (Fritz and Mathewson, 1957).

The media's influence on informal material convergence behavior was evident after Hurricane Andrew. The Federal disaster response was perceived to be slow to materialize in the disaster-impacted communities in southeastern Florida. Frustrated by the initial response, Dade County's Emergency Director Kate Hale appealed directly to the national media for help, "Where the Hell is the cavalry on this one?" This informal request for assistance triggered a mass influx of material donations into Dade County and southeastern Florida that had substantial negative impacts on logistical and distributive systems for several months after the appeal (Neal, 1994). This ill-advised plea for "everything" overwhelmed donations management activities and produced excessive amounts of unsolicited donations that emergency management could not handle. Emergency management received a great deal of negative publicity from this informal media appeal. Dade County's former Emergency Director failed to comprehend the influence and power that the media has in triggering informal material convergence behavior.

Advancing Technology

Technology has transformed how society receives, perceives, and responds to disasters. Technological advancements in communications and information sharing capabilities have considerably increased the speed, availability, and distances across which disaster news and information travels (Hughes et al., 2008). Technology permits information to be shared at a much greater rate and to a much larger audience allowing more individuals to be more engaged and participate in active disaster events (Hughes et al., 2008). Disaster news and information can be disseminated globally; through television, radio, print, internet, mobile communication devices, social networking, and instant messaging services. For many donors, technology has made contributing resources to non-local charities as easy as contributing resources to local charities. Thus technology has increased the emergence of informal material convergence behavior beyond disaster-affected communities. Hughes et al. (2008) believed that society's interest and participation in disaster relief would only escalate as technology continued to advance and information sharing continued to increase. Oosterhof et al. (2010) concurred and believed that the more people were engaged in the plights of others in need, the likelihood increased that these individuals would donate resources to help disaster survivors. Hughes et al. (2008) suggested that the only limiting factors for donors today were their access to technology and their technical proficiency rather than donor distances from disasters.

In summary, social norms, media influence, and advancing technology are relevant, ever-increasingly important factors that affect informal material convergence behavior. Social norms help define individuals' roles in society and what are deemed appropriate social responses to disasters. The media influences how society and individuals receives and perceives information and how disaster narratives are told. And advancing technology allows society and individuals to

communicate, share information, and participate in disasters in manners that were inconceivable 100 years ago. Macro-level factors are important for society and individuals, but they are not the only factors that affect individual decisions to make charitable contributions to disaster relief.

Micro-Level Disaster Responses: Individual Factors Affect Donations

Just as macro-level factors can play an important role in societal-wide donation behavior, so too can micro-level factors enhance individuals' propensity to make charitable contributions. Individual responses to disasters often result in material donations for disaster relief activities. There are numerous micro-level factors that influence individual decisions to make charitable contributions; however no single factor motivates all donors to respond in the same way to every disaster (Brown, 1997). *Social exchange theory* suggests that four factors in particular *costs*, *rewards*, *legitimacy*, and *trust* affect individual decision-making processes and help-giving to others after disasters. Social-psychological research also points to social cognitions and demographic factors affecting help-giving/prosocial behaviors of which informal material convergence behavior is a part.

Costs Affect Giving

Costs are important to donors (and potential donors) and affect their decision-making processes with respect to making charitable contributions. If donor costs for donating are low, the likelihood of donating increases (Bekkers, 2005; Bekkers and Wiepking, 2007). Research suggests that potential donors often make benefit-cost analyses before deciding to volunteer time and services and/or make donations (Piliavan et al., 1981; Dovidio et al., 1991). *Social exchange theory* implies that donors weigh personal costs incurred against potential rewards received when considering helping others (Piliavan et al., 1975). Donors expect dividends and make decisions to engage in helping behaviors when potential rewards are greater than the potential costs

(Piliavan et al., 1975; Dovidio, 1984). Donors that over-rationalize donation decisions tend to provide fewer donations than those emotionally charged or motivated helpers (Neyfakh, 2011).

Total costs for donors making charitable contributions are not readily apparent. The total or actual costs consist of all personal time and expenses used to purchase, collect, and send donations. Actual costs include both direct costs (i.e., expenses expressly linked to or identified with donations) and indirect costs (i.e., expenses incurred not expressly linked or clearly identified with donations). Indirect costs are not as obvious as direct costs and often more difficult to quantify. For example, direct costs for donating newly-purchased items include the purchase price and applicable sales tax. However, indirect costs include all time and expense involved in shopping for donations, transportation, packaging, mailing, and/or transporting them to collection sites.

Transporting material donations to disaster sites markedly increases the total costs. Transportation costs for hauling material donations often are not accounted for by charities conducting collection drives (Regalbutto, 2010). Additional transportation costs often include truck rental, fuel, driver, and driver per diem (FEMA, 2007). Collection drive organizers may request monetary donations to defray unanticipated transportation expenses. Indirect costs for commercial mailing, shipping, and transporting material donations often exceed the direct costs and value of the donations themselves (Regalbutto, 2010).

Knowing the total costs in advance of contributing donations may influence the types of donations that donors contribute. Financial contributions have known costs associated with them; typically it is the direct cost of the donation. Financial contributions eliminate most indirect costs and all the transportation expenses that material donations incur. Often financial transaction fees are waived by banks, credit card, and cell phone companies for charitable contributions.

Traditional monetary donations (e.g., cash, checks, and money orders) have incidental postal delivery charges compared to material donations; modern electronic financial transfers do not have mailing, packaging or transportation fees.

Rewards Affect Giving

The receipt of potential intrinsic and/or extrinsic rewards is a highly important factor that affects potential donors' decision-making processes for charitable contributions. The *classical model of giving* indicates donors receive intrinsic rewards knowing that their contributions are used by others in need (Schwartz, 1970; Vesterlund, 2006). Some donors view giving to others as personally rewarding experiences (Bryant et al., 2003; Bekkers, 2004). Some donors gratify emotions that can only be experienced by giving (Neyfakh, 2011) such as “helper high” (Wuthnow, 1991) and others receive a “warm-glow” (Andreoni, 1990). Some donors alleviate guilty feelings through giving (Vesterlund, 2006), connect emotionally and convey sympathy to others (Sen, 1977). And some donors share patriotic feelings (Steinberg and Rooney, 2005) and express unity (Phillips, 2009) with disaster survivors by donating resources to others in need.

Ironically, the reward of giving for the donor may not be shared by the receiver (Neyfakh, 2011). Some donors give with little concern about the impact that their donation may have on those receiving them (Andreoni, 1989; Neyfakh, 2011). For example, *egotistic* donors are motivated by the potential for receipt of personal compensation, rewards, and/or future benefits (Brehm et al., 1999). Rewards for egoistic donors may include increased social status, reputation, personal prestige, esteem, political, and economic gains (Vesterlund, 2006). Some donors may enhance their personal status and reputation (Muehleman et al., 1976). Some donors are motivated by tax incentives and tax credits for making charitable contributions. Some donors exploit disasters and use donations management as waste disposal sites for discarding unwanted

household goods, unloading excessive business inventory, and/or dumping useless garbage materials in order to receive tax credits for charitable contributions (Hogland, 2007).

In summary, costs and rewards often go hand in hand when individuals decide whether or not to make charitable contributions. Many donors make rational decisions based upon potential costs weighted against potential rewards. The likelihood that individuals will engage in helping behaviors increases when the costs to give are perceived as low and the potential for rewards are perceived as high.

Legitimacy and Trust Affect Giving

Legitimacy and trust are important factors that affect donors' decision-making. Donors are more likely to provide donations to disaster survivors that have perceived legitimate needs and less likely to contribute to those whose needs are perceived as illegitimate (Krebs, 1970; Schwartz and Fleishman, 1978). Legitimacy of need is viewed as need that is caused by external circumstances that are beyond the survivor's control; thus illegitimacy is viewed as need that is caused by the intentional acts of selfish and needy persons (Schwartz and Fleishman, 1978; Furnham, 1995).

Disaster type also effect perceptions of legitimacy and trust and influence helper's decisions to make charitable contributions. Donors are more inclined to donate to survivors of natural disasters and less-inclined to donate to survivors of anthropogenic, environmental, and/or technological-based disasters (Zagefka et al., 2010). Zagefka et al. (2010) reported that donors were more interested in helping those perceived as blameless or victimized rather than help those perceived as culpable for their own troubles. Many donors need to be persuaded that the privations experienced are real and have confidence that their donations are used appropriately to meet those needs.

Donors need to know that nonprofit organizations are trustworthy entities before contributing resources. The perceived trustworthiness increases when nonprofit organizations have a pre-established history of conducting disaster relief and that others are donating resources to them (Bekkers and Wiepking, 2007). For example, donors are more likely to trust nonprofit organizations when know their donations will be matched by third or outside parties (Bekkers and Wiepking, 2007). Donors who are inspired to make donations because of matching programs often are not motivated to make larger donations (Neyfakh, 2011). Donors have more confidence in nonprofit organizations when they believe most of their financial contributions are spent on disaster relief (Bekkers, 2006).

In summary, potential donors need to know that their charitable contributions are legitimately needed and will be managed by trustworthy sources. Nonprofit organizations can increase their perceived trustworthiness by having previous experience conducting disaster relief activities and effectively managing donated resources.

Social Cognitive Factors Affect Giving

Numerous and diverse social-cognitive and socioeconomic factors affect donor decision-making processes. Social cognitive factors are defined as beliefs or belief systems that affect actions (Bandura, 1982). Cheung and Chan (2000) identified seven social cognitive factors that impact helper intentions to make charitable contributions: identity as a previous contributor (i.e., based upon past donations to church, charity, and/or disaster relief activities); knowledge and awareness of disasters; knowledge of disaster survivors; sense of moral obligation to help others; perceived legitimacy and trustworthiness of those requesting and managing donations; perceived legitimacy of need for donations; and, efficacy (Oosterhof et al., 2008). Efficacy is a highly important factor for determining contributions; that is, donors must perceive that their donations

are needed and that their contributions make a difference to disaster survivors (Oosterhof et al., 2008).

Demographic Factors Affect Giving

Socioeconomic attributes affect donor intentions to make charitable contributions (See Schwartz, 1970; Hood et al., 1977; Cheung and Chan, 2000; Bryant et al., 2003; Bekkers, 2004; Steinberg and Rooney, 2005; Bekkers, 2006; Vesterlund, 2006; Bekkers and Wiepking, 2007; Muller and Whitman, 2008; Destro and Holguín-Veras, 2010; Oosterhof et al., 2010). Destro and Holguín-Veras (2010) modeled the socioeconomic characteristics of individuals who intended to make contributions to charities. The positive socioeconomic characteristics correlated with giving included: income (i.e., high income and wealth), employment status (i.e., employed), education status (i.e., greater attainment), and marital status (i.e., married). Age (increased with ascending age) and sex (i.e., female) were also key attributes; however race was not (Bryant et al., 2003; Steinberg and Rooney, 2005; Destro and Holguín-Veras, 2010).

In summary, donors' decision-making processes and intentions to make charitable contributions are influenced by a mixture of social-psychological factors. For many donors, donating to charity is a therapeutic outlet. Although therapeutic, most donors still weigh costs, potential rewards available to them, and attempt to confirm if those managing and receiving donations are legitimate and trustworthy before deciding to make charitable contributions. Research indicates donors are more inclined to provide donations when personal costs are low, potential for personal rewards are high, and the need is legitimate and nonprofit organizations are trustworthy. When the aforementioned criteria are reached, these are strong indicators that donors may decide to make charitable contributions (Bekkers, 2004). However, the point of this discussion is not how to promote donations for nonprofit organizations. The point is, emergency

management can use existing research on the role of costs, rewards, legitimacy, and trust to trigger a collective paradigm shift from informal material convergence behavior and move towards providing monetary donations instead material donations after disasters. To this extent, this section must conclude with a discussion of how emergency management can:

1. Persuade potential donors that providing monetary donations may be less costly to make than material donations (i.e., no hidden, indirect, and/or surprise costs);
2. Persuade potential donors that providing monetary donations will be more rewarding because it can be put to better use by the recipients;
3. Persuade potential donors that providing monetary donations will reach those with legitimate needs and be put to legitimate use; and,
4. Persuade potential donors that those managing their monetary donations are trustworthy.

Using Social-Psychology to Develop Persuasive Hazard Awareness Messaging

In the previous sections, it was demonstrated that certain social-psychological, socio-economic, and demographic factors impact individual decision-making and informal material convergence behavior. So, if certain social-psychological factors that motivate individuals to respond in a similar manner and contribute material donations after disasters; can those same social-psychological factors be modified in such a way to persuade those same individuals to change how and what is donated? In this section, social-psychological research is considered as a mechanism to increase the persuasiveness in hazard awareness messaging and long-term educational efforts to reduce informal material convergence behavior. Practical ideas are also suggested and discussed to promote public awareness of this prevalent and pervasive problem.

In the United States, emergency management is effective at conveying warning messaging to receivers. Receivers often respond as directed when warning information is provided by credible sources like emergency management entities (Foy, 2012). Receivers are conditioned from youth to regard warning messages as serious information to be heeded. The effectiveness of warning messages can be attributed to the government and society placing strong emphasis on government-issued warning messages and society conforming to warning messages received. This *socialization* is reinforced from childhood through adulthood; individuals are conditioned through emergency drills and exercises to take protective actions based upon the information received. The *protective action decision model* (PADM) indicates that individuals respond to environmental cues based upon the threat perception by taking protective actions, seeking additional information, resuming normal activities or undertaking activities that reduces their emotional or psychological stresses (Lindell and Perry, 2004). Society deems the conveyance of warning messaging as the government's responsibility; individuals are responsible for receiving warning messages and taking socially acceptable and pre-programmed protective actions to threats.

In contrast, *hazard awareness messaging* has not received the same strong emphasis that warning messages have received in this society. Hazard awareness messaging is non-warning, long-term risk communications intended to induce macro-level and micro-level cognitive behavior modification (i.e., long-term hazard adjustments) that increases societal and individual safety and wellbeing over time (Lindell and Perry, 2004). This messaging includes non-imminent hazards, threats or issues related to preparedness, mitigation, and recovery. These messages have a positive track record for producing cognitive behavior modification; however there are definite negatives for selecting this type of messaging.

The public does not regard hazard awareness messaging with the same urgency as warning messaging. Warning messages convey information related to potential and/or imminent threats to life, home, and property; while hazard awareness messaging conveys important but not life threatening information. Due to the non-imminent threat nature of messaging, receivers often ignore non-warning messaging in the short-term (Lindell and Perry, 2004). According to *behavioral decision theory*, individuals seek rational choices and select the alternatives that best fit their benefit/cost ratio (Lindell and Perry, 2004). This theory indicates that individual rationalities for making decisions are bounded by limited information, in which benefits and costs are subjective and biased (Lindell and Perry, 2004). If no imminent threat to loss of life, home, or property exists, then individuals may be less inclined to be attentive to messaging as the benefit/cost rationale for potential loss or gain is not forthcoming. Thus the alternatives selected are based on limited information and routine, not analytical, decision-making processes (Lindell and Perry, 2004). Since there is no imminent threat warning attached to messaging only a small amount of hazard awareness messaging may reach beyond the normal, everyday decision-making processes.

Hazard awareness messaging may be ignored in short-term; however this is not a practicable reason to abandon the messaging strategy. Social-psychological marketing research indicates that individuals need to be exposed to advertising and marketing messages a minimum of seven times to effectively influence their buying decisions (Zahorsky, 2012). Continued, longitudinal exposure of messaging by receivers can produce positive changes to prevailing social norms (i.e., acceptable donations to contribute after disasters) and can induce long-term cognitive behavioral modification. The likelihood of producing widespread social change through hazard awareness messaging increases when receivers are consistently and continually

exposed over time allowing society to collectively and individually receive, process, and assimilate new information and to respond appropriately when disasters occur.

Hazard awareness messaging can affect social change over time. For example: The U.S. Forest Service has had significant problems with forest fires. According to the Forest Service's fire statistics, 90% of all forest fires were human-caused; and thus, most forest fires were preventable (SDDA, 2010). With this knowledge, in the 1940s, the Forest Service began a national public awareness campaign intended to alter the public's perception, attitudes, and behaviors towards forest fire prevention (SDDA, 2010). In 1944, the Forest Service and the War Advertising Council developed the fire prevention symbol/character, Smokey the Bear, and added the slogan, "Only you can prevent wildfires!" in 1947. The Smokey the Bear publicity campaign for fire prevention has had a strong correlation on the decrease of annual number forest fires (1930s-167,000 to the 2000s-65,000) and annual number of acres lost (1930s-22 million acres lost to the 2000s – less than four million acres lost) after the campaign inception (SDDA, 2010; AEF, nd). Long-term exposure to this memorable character and unforgettable slogan was highly effective at raising public awareness; it helped alter people's thoughts and behaviors towards fire prevention; and reduced the negative aspect of human-based behaviors through messaging. In summary, the use of hazard awareness messaging can be effective at transforming public perceptions, thoughts, and actions and altering negative behaviors through long-term exposure and public acceptance of the message. Hazard awareness is worth the long-term investment to prevent a solvable problem; it can pay dividends over time.

Emergency management could use the Smokey the Bear approach to hazard awareness messaging that the Forest Service used. Emergency management could introduce memorable characters and unforgettable slogans into hazard awareness messaging. For example: *Cash Man!*

Cash Man is the hunger-fighting superhero character spokesman for the nonprofit, Cash Feeds More Organization. Cash Man's super-power is his ability to explain "the economics of food pantry donations" (Cashfeedsmore.org, n.d.). Cash Man is used to promote monetary donations to food banks instead of contributing food (i.e., material donations). Cash Man has appeared on ABC's *Good Morning America* as well as at other fund raising events, parades, and food bank promotions. The Cash Man video promotes cash donations for local food banks. Emergency management could model this message; it is memorable message that is delivered in a manner that most everyone can understand (see cashfeedsmore.org/Videos.html). There is no reason to believe that emergency management cannot replicate the success that the Forest Service had on forest fire prevention through its own messaging and prevent unsolicited donations before donors make contributions.

Emergency management should endeavor to transform hazard awareness messaging into long-term persuasive messaging to produce social change over time. Persuasive messaging is a powerful tool to consciously/subconsciously influence receivers' minds, attitudes, and opinions to manipulate their behavioral responses to information provided (Ajzen and Fishbein, 1980). The psychological characteristics of individual receivers have direct impacts upon how information is received, interpreted, communicated, and responded (Lindell and Perry, 2004). The Forest Service shown that the public's long-term exposure to memorable, carefully crafted messaging, repeated enough times for saturation, can resonate through multiple generations. This is a fundamental reason why I contend that emergency management should integrate social-psychological research into persuasive hazard awareness messaging. I believe that the message content is the key component to persuasive messaging (Lindell and Perry, 2004). Message content is vital to establish what information is shared and disseminated and how information is

received, interpreted, and acted upon. Persuasive messaging should get receivers' attention, be easily comprehended, be accepted, be retained, and ultimately cause desired behavioral change (Lindell and Perry, 2004). Message content is the place emergency management can start to develop their persuasive messaging to control informal material convergence behavior.

Persuasive Hazard Awareness Messaging: Message Content

Emergency management should begin to integrate four important concepts into hazard awareness messaging: first, financial contributions are the best donations to contribute for disaster relief activities; second, never give unsolicited donations; third, offer quality material donations through the National Donation Management Network; and fourth, only contribute material donations to charities that accept them.

First, hazard awareness messaging should promote financial contributions as the best donations to contribute for disaster relief activities. Emergency management struggles to tell the general public to send monetary donations and not to send material donations unless they are first offered and accepted (Kim, 2004). Donors should not be discouraged from making donations but encouraged to donate responsibly. Donor responsibility can be emphasized in a manner that accentuates the beneficial aspects that monetary donations have over equally-valued material donations. Hazard awareness messaging should include any, all, or similar-type statements:

- Financial contributions are the easiest and most convenient donation to make.
- Financial contributions are the best donation to receive, process, and administer.
- Financial contributions are the fastest, most efficient way to provide resources to disaster survivors.

- Financial contributions stretch further and are better used than newly purchased or secondhand donated materials.
- Financial contributions ease most of the problems associated with transporting and managing material donations across geopolitical borders.
- Financial contributions are crucial to fund disaster relief activities.
- Financial contributions offer flexibility for disaster relief agencies to purchase specific, needed resources from multiple vendors in different local markets.
- Financial contributions reduce the need to store and transport material donations.
- Financial contributions can purchase products in disaster affected areas and help stimulate disaster affected economies.
- Send financial contributions to established and reputable nonprofit organizations and charities. The Better Business Bureau rates charities on their website (www.bbb.org).

In summary, monetary dollars go further and farther than material dollars for disaster relief activities. Collectively, these messages would communicate the effectiveness (i.e., more rewarding to donors and receivers) and the efficiency (i.e., less costs to donors and recipients) of providing financial contributions

Second, hazard awareness messaging should convey that unsolicited donations should never be sent for disaster relief activities. The focus should be on the hidden costs to donors and recipients. Hazard awareness messaging should include any, all, or similar-type statements:

- Unsolicited donations are never welcome for disaster relief activities.
- Unsolicited donations are cost prohibitive to manage for disaster relief.
- Unsolicited donations often arrive in volumes that far exceed need.
- Unsolicited donations are not needed and are not usable for disaster survivors.

- Unsolicited donations severely disrupt the recovery of local economies.

In summary, unsolicited donations are never welcome, wanted, or needed for disaster relief activities. They are costly to the recipients to manage and distribute and surprisingly costly for the donors to contribute (e.g., transportation costs).

Third, hazard awareness messaging should persuade those who have quality material donations, to offer their material donations through the National Donations Management Network (NDMN). Financial contributions are the preferred donations; however some donors have quality material donations needed for disaster relief. NDMN allows donors the opportunity to offer material donations that can be useful for emergency management and allows nonprofit organizations to accept and receive specific needed resources. The focus shifts from sending sporadic donations to offering specific donations; donors with material donations can still participate in disaster relief. Messaging should convey that individuals receive financial and psychological rewards from knowing that their material donations are needed before donors contribute resources. Thus donors can feel good, save money, and possibly arrange to have their donations transported at little or no expense. Hazard awareness messaging should include any, all, or similar-type statements:

- NDMN is a virtual donations website to offer and contribute quality material donations for disaster relief.
- NDMN is a simple, easy process to use.
- Donors can manage donations in a national virtual warehousing system before contributing resources.

- Donors offer donations and match with nonprofit organizations needing their donations. Once donations are accepted donors can make arrangements to transport donations to nonprofit organizations.
- Donors benefit by saving money and knowing they donated needed resources for disaster relief.

In summary, emergency management benefits the most from NDMN, nonprofit organizations benefit by controlling the types, quantities, qualities, and transportation of material donations received before donations are actually contributed and physically delivered.

Fourth, donors should only contribute material donations to charities that accept them. Emergency management should provide donors with other viable alternative outlets for contributing quality material donations other than the NDMN. Donors should be directed to local charities that accept unsolicited donations, such as the Salvation Army, *Bibles for Missions*, *Goodwill*, *Silver Angel*, and *Dakota Ranch Thrift Stores*. Donors can also be directed to for-profit thrift stores such as *Savers*, *Unique Thrift*, and *Valu Thrift*. Be aware that nonprofit thrift stores often sell donated materials to for-profit thrift stores. Another alternative for donors is for them to sell their material donations at yard sales, on *eBay* or *Craig's List* and then they can contribute the proceeds to disaster relief refunds.

Social-Psychological Factors that Influence Individuals to Donate

Social-psychological research provides valuable insight into what micro-level factors and circumstances influence individuals to make charitable contributions. Individual decision-making processes involve a mixture of conscious and subconscious motivators, most prominently balancing potential *costs* and *rewards* for helping behavior and determining the *legitimacy/trustworthiness* of requesting sources. These factors are known to impact individual

decision-making processes. To control informal material convergence behavior, emergency management should incorporate the following social-psychological factors into their hazard awareness messaging.

Donor “Costs”

The actual costs that donors expend on donations are not readily apparent. Monetary donations often cost donors far less than material donations. Persuasive hazard awareness messaging should attempt to identify the costs associated with contributing both monetary donations and material donations and make the case that financial contributions cost less to give than do material donations.

The logic of this argument may not be immediately obvious. To make the case, potential donors must be challenged to calculate both direct and indirect costs. Donors sending newly purchased items will be aware of the donations direct cost, that is, the price of the items at the store and applicable taxes. Donors sending used items can only make subjective estimates of the items remaining value to the donor and what the donor is sacrificing by donating the items. Even in this situation, the guess may be fairly accurate if the donor no longer sees the item to be personally useful. In the latter case, the direct value of the donation would be close to zero. Thus, whether the donated items have been newly purchased or are secondhand (i.e., previously used), the donor is likely to have an accurate sense of the direct costs of the material donations.

In contrast, the indirect costs of donating either newly-purchased or secondhand items are likely to be less obvious, more difficult to quantify, and may even be overlooked when they are donated. The indirect costs would consist of all related expenses used to purchase products, including personal time and expenses (e.g., shopping, transportation, packaging, mailing, and/or transporting them to collection sites). Transportation costs dramatically increase the actual costs

spent on donations; even material donations locally collected have high shipping costs. Whether material donations are delivered in person or mailed to collection sites, it is important to underscore the actual costs of transporting material donations from one site to another. Indirect costs for mailing, shipping, and transporting material donations often exceed direct costs and the total value of contributed donations (Regalbuto, 2010). Thus part of the message content for hazard awareness messaging would need to focus on indirect costs as a means of making material donations less appealing to potential donors.

In contrast to material donations, at least the secondhand items, the direct costs of monetary donations are clear and salient. The clarity of the direct costs for financial contributions may be a deterrent for many potential donors. Thus, once again, messaging needs to focus on indirect costs. The advantages of monetary donations versus material donations become quite apparent. Financial contributions have fewer indirect costs associated with them, in many instances there are no indirect costs. Financial transaction fees often are waived by banks and credit card companies for donations made to disaster relief funds. Electronic transfers also have no mailing, packaging or transportation fees. However traditional monetary donations (e.g., paper checks and money orders) have incidental postal packaging and delivery charges. The take home message is that financial contributions have little to no indirect costs associated with this donation type.

Cost is an important factor to consider when deciding what type of donation to contribute to disaster relief. Financial contributions eliminate most indirect costs and transportation expenses that material donations incur. Financial contributions are the clear winner and least costly alternative for donors when actual costs are considered and compared. When donors weigh “time” and “effort” into costs; financial contributions are the most convenient, time-

effective, and cost-effective donation type. Benjamin Franklin placed monetary value on time and effort when he stated that “time is money.” Social-psychological research indicates that donors are more likely to make charitable contributions when costs (and likely effort) are low. Cost is a great starting place to emphasize the benefits of financial contributions for disaster relief activities.

Direct and indirect costs affect nonprofit organizations and message content should note this as well. Nonprofit organizations absorb most of the costs that are associated with donations management. The costs for managing unsolicited donations are fiscally burdensome and the primary reason that most nonprofit organizations do not accept them. Ultimately though, it is donors who are paying the price for unsolicited donations, because most nonprofit organizations receive all of their funding from private sector donations. Thus the cost of material donations for nonprofit organizations therefore becomes an added indirect cost for donors.

In contrast, financial contributions do the most good and are the best donations because they are the easiest, fastest, most efficient way to provide needed resources to disaster survivors. Financial contributions have fewer hidden expenses related to shopping, packaging, mailing, and/or transporting materials to disaster sites and across geopolitical borders. Financial contributions can be used to help others throughout the entire disaster cycle. In other words, financial contributions are the least expensive and most beneficial means of helping others to recover and return to a sense of normalcy. The message that emergency management needs to effectively convey is this, “Financial contributions are the best way you can help others in need.”

Donor “Rewards”

Donors receive rewards for contributing to disaster relief activities. Persuasive hazard awareness messaging should emphasize the potential extrinsic and intrinsic rewards associated

with donating to disaster relief. Extrinsic rewards may include receiving financial tax incentives, charitable tax deductions, small “thank you” gifts, business coupons, food, and certificates of appreciation for donations. Intrinsic rewards may include emotional feelings expressed by “doing the right thing”, “being heroic”, and “feeling good” about helping others in need. Emergency management should attempt to make contributing monetary donations synonymous with positive, “feel good” experiences that are the best emotional bang for the buck. Hazard awareness messaging should also emphasize that the greatest potential benefits the recipients is achieved when monetary donations are contributed for disaster relief activities. Financial contributions are necessary and help the most people in need. Donors often are rewarded in knowing that contributing monetary donations is the most practical and appropriate donation to give for disaster relief activities. Since not all rewards motivate donors in the same manner emergency management should use a mixture of extrinsic and intrinsic rewards to increase effectiveness when formulating hazard awareness messaging.

The appeal to send financial contributions instead of unsolicited material donations should also include a normative component. Do the right thing. Give the right way to help others. The right donation for disaster relief is a financial contribution. Never send unrequested items to nonprofit organizations or into disaster-impacted areas. However, if you have quality material donations, offer them first to nonprofit organizations at the National Donations Management Network website (www.aidmatrixnetwork.org/fema/). The National Donations Management Network is the right place for donors to offer material donations so that the right people receive the right resources at the right time. Or contribute your items to local charities that accept material donations. Or else sell your items at yard sales, at consignment shops, or on *eBay* and *Craig’s List* and donate the proceeds to disaster relief.

Donor “Legitimacy/Trust”

In addition to donors perceiving monetary donations as less costly, more rewarding, and there are alternative forums and outlets to donate items to charities that are more appropriate, social-psychological research suggests that donors are more likely to give if the need is perceived to be legitimate and the recipient is trustworthy. These factors may trigger donors to choose material donations over monetary donations unless these factors are addressed in messaging efforts. If the need is clearly legitimate, donors may decide to give everything they reasonably can, in effect, “piling on” with or without financially contributing resources as well. In addition, financial contributions may be perceived, because of the very flexibility of their use, as more easily diverted from legitimate need than material donations are likely to be. In other words, some donors may see less of a trust issue in giving nonprofit organizations material donations than monetary donations.

Some donors fear that financial contribution to nonprofit organizations may be more easily misused than material donations (Helium, 2010). A number of major scandals involving monetary donations have added fuel to this perspective. For example, in 2005 FEMA and the American Red Cross issued emergency debit cards for some survivors of Hurricane Katrina. The FEMA MasterCard had \$2,000 placed on it and the Red Cross card had \$1,500 to be used for emergency related expenses (e.g., food, toiletries, medicine, hotel expenses, etc.). According to FEMA (2005b), the debit cards provided “expedited” emergency assistance and were only an initial payment portioned against subsequent aid payments for eligible recipients. However many Americans were shocked by the ensuing media reports of survivors using the debit cards on nonessential, superfluous purchases and illicit activities not within the scope of assistance that the cards were intended. The debit cards were used to purchase luxury handbags, designer

clothing and shoes, big screen televisions and DVDs in Atlanta, Georgia as well as used to buy alcohol at adult clubs in Houston, Texas (WND, 2005). While these abuses brought negative publicity to FEMA and the Red Cross; getting monetary resources into the hands of reputable nonprofit organizations with disaster relief experience is still the best way to help disaster survivors and local economies recover.

Many donors perceive that material donations are the best donations to contribute where needs are clearly legitimate and compelling (Helium, 2010). Since survivors appear to need everything, some donors believe material donations are best because they can be used almost immediately (Helium, 2010). However nonprofit organizations such as the American Red Cross typically have all the essential material resources needed for the initial stages of disaster relief. Since donors are more inclined to donate early in the disaster response phase and not later in during the recovery process, persuasive hazard awareness messaging should emphasize financial contributions as the best long-term mechanism to fund supplement disaster relief actions, services, purchases and meet emerging needs of disaster survivors.

In summary, the core of the message content is, *send financial contributions only!* This message must then be supplemented by also addressing costs, rewards, legitimacy, and trustworthiness. The misperception that “everything” is needed appears to perpetuate from disaster to disaster. Thus material donations seem to be reasonable and legitimate contributions to make to survivors that conceivably have lost all of their possessions. Some donors view material donations as more legitimate or appropriate gifts because such gifts appear to “fit” their conceptual model or construct of what disaster survivors legitimately need (Helium, 2010). Therefore it is important to establish that the need for financial contributions is genuine and that there are numerous appropriate uses that unsolicited donations do not meet.

CHAPTER FIVE. WHERE DO WE GO FROM HERE?

Informal material convergence behavior is a highly problematic issue for emergency management. Financial contributions are the preferred donations for disaster relief activities. Material donations are needed to aid disaster survivors, however, problems begin to arise when donors contribute resources that are not requested and not needed. Unsolicited donations produce more problems than they provide solutions. While there is no single factor that motivates individuals to respond in the same manner to every disaster, there are, however, known macro-level factors and micro-level factors that influence prosocial behavior. Society presently considers informal material convergence behavior an appropriate prosocial behavior in response to disasters. However, for emergency management, this prosocial behavior is a problem of social control after disasters (Fritz and Mathewson, 1957).

New approaches are needed to control informal material convergence behavior. For social control to work, widespread cognitive behavior modification and extensive changes to prevalent social norms need to occur. Social-psychological research is a powerful tool for emergency management to incorporate into hazard awareness messaging before disasters occur. Emergency management can create persuasive messaging techniques to influence widespread cognitive behavior modification and to help establish new social norms for socially appropriate donations to control informal material convergence behavior.

Emergency management now has the tools to create persuasive hazard awareness. Valuable information for developing persuasive messaging campaigns is provided throughout this paper. Armed with the tools for persuasive messaging, where does emergency management go from here?

From my perspective, emergency management has two main challenges to successfully disseminate hazard awareness messaging and initiate widespread cognitive and behavioral modifications. The first challenge is to educate and inform the media and general public to the types of donations that are appropriate to contribute for disaster survivors. And the second challenge, based on the education component, is to establish a new social norm for donors to contribute these appropriate donations types in the manners appropriate for effective disaster relief activities. Three overarching goals that I see embedded in these two challenges are the following: 1) increase public knowledge of issues; 2) define and promote donor responsibility; and, 3) redefine socially-appropriate donations and manners to contribute donations. If emergency management can reach these goals, and is able to overcome these challenges and establish new social norms; over time, informal material convergence behavior could be altered from a negative to a positive prosocial response.

Educating the Media and the Public to Establish New Social Norms

Fritz and Mathewson (1957) and Phillips (2009) emphasized the necessity for an educational component to increase public knowledge and to alter current donations behaviors after disasters. The media and the public are the two main audiences for these educational efforts. Educating the media and the public should be a top priority for emergency management. It is vitally important to control the messaging in order to control informal material convergence behavior.

The media, as a gate keeper for disseminating most public information, plays a vital role in managing informal material convergence behavior. Media and social networks frame disasters in ways that both help and hinder disaster relief efforts. Media can help to broadcast warnings, disseminate information accurately and quickly, speed up disaster assistance, and reassure family

of the well-being of loved ones (Wegner, 1985; Tierney et al., 2001). “By reporting extensively on disasters and the damage they create, the media can speed up assistance to disaster-stricken areas, and post-disaster reporting can also provide reassurance to people who are concerned about the well-being of their loved ones” (Tierney et al., 2001, p. 142). However the media also causes significant problems by conveying false, erroneous and misleading information, perpetuating disaster myths and stereotypes and over, under or not emphasizing problems (Wegner, 1985; Tierney et al., 2001). The media slants their coverage to accentuate minor issues causing public concern, forcing decision makers to refocus from important matters and respond to less significant issues (Tierney et al., 2001).

Educating the media is important for reaching the general public with proper messaging. If the media influences the onset of informal material convergence behavior, media can also be used as a tool to control it (Fritz and Mathewson 1957; Scanlon et al., 1985; Scanlon, 1992). Though reeducating the media, emergency management can also reeducate the public. Phillips (2009) stated that educational plans must help “educate, motivate, and inspire” individuals to make informed decisions, be cognizant of their donating actions, and to donate more responsibly (p. 390). Thus education can help define appropriate donations to contribute, but also identify the proper mechanisms and manners to donate resources. Thus the goal is help donors recognize that financial contributions are legitimate and the most socially-appropriate donations to contribute, useful and necessary throughout the entire recovery phase (Phillips, 2009). Phillips (2009) provided examples on how to reeducate the media including, meet with the media personally to explain the need for financial contributions, provide media with prewritten press releases and bulleted talking points, and make it easy for media to get the appropriate information necessary

for their reports. While media provides a much broader forum for public access, emergency management can also reach the public through direct public outreach to deliver messaging.

Emergency management should also reach the public directly with hazard awareness messaging. Emergency managers can hold public outreach and awareness sessions in non-disaster times geared toward individuals, community leaders, schools, businesses, and nonprofit organizations and/or groups that are likely to participate in some form of charitable donations and/or disaster relief activities. Reaching the public directly with succinct and repetitive messaging is critical to begin cognitive behavior modifications. As stated previously in Chapter Three, warning messaging has been effective in the United States due to governmental and societal buy-in. Warning messages are effective also because they are socially reinforced through socialization; children and adults are conditioned throughout their lives to take predetermined protective actions based upon warning messaging received from credible sources. The same buy-in is not present with respect to hazard awareness messaging, but it is the latter type of messaging that is the most likely vehicle altering material donations into monetary ones.

Fritz (1968) stated that emergency management spends most of its financial resources on response and recovery based activities. However, allocating limited resources to long-term messaging eventually would have a positive net return on investment through fewer resources expended to manage unsolicited donations. Messages such as the following: Financial contributions are the best donations, never send unsolicited donations, offer material donations through the National Donation Management Network, and only contribute material donations to charities that accept them, are simple enough that school children can learn, recite, and then respond. If society can be educated to attend and respond to these messages then unsolicited donations would slowly decline over time until only financial contributions are contributed for

disaster relief. This is not pie-in-the-sky philosophy; remember the positive impact that Smokey the Bear had on forest fire prevention.

In summary, if society deems informal material convergence behavior and unsolicited donations to be behavioral problems worth correcting, then the appropriate corrective actions can be enacted to ensure that individuals are held responsible to conform and respond to disasters with the proper donation types contributed in newly identified socially-appropriate manners. And, if emergency management can strive and reach these three goals, and is also able to overcome these two challenges by educating the media and the public and establishing new social norms for contributing resources after disasters; then perhaps, over time, informal material convergence behavior can be altered from a negative to a positive prosocial response.

To meet the two challenges to educate the media and the public and establish new social norms for contributing donations after disasters, I recommend that emergency management take the following actions:

1. Integrate social-psychological research. Social-psychological research should be used to formulate persuasive hazard awareness messaging. Informal material convergence behavior is a social-psychological problem that can be resolved through social-psychological approaches. Emergency management can refer to social-psychological research to understand the underlying dynamics of prosocial behaviors. Social-psychological research indicates there are positive, relevant factors and situations that affect the onset of prosocial behaviors. Thus, emergency management can use this research to transform undesired cognitive processes to modify desired behaviors to correct the problem with unsolicited donations.

2. Commit to reeducating the media and the general public through hazard awareness messaging. Emergency management has to make a lasting commitment to and investment in persuasive messaging to transform negative prosocial responses into positive ones. Messaging will need to get more creative and be highly repetitive to have the widespread social impact needed to change social norms. Messaging should be constructive, informative, instructive, memorable, and entertaining. Donors may need to be exposed to marketing messages and advertisements a minimum of seven times to effectively influence buying decisions. Thus, hazard awareness messaging will have to be conveyed in numerous and varying styles, formats, languages, and graphics and broadcast in many different audio/visual mediums to begin to alter donating attitudes and behaviors in the long-term. Replacing well-established customs, beliefs, and social norms with new thought patterns, actions, and social expectations takes time and consistent social reinforcement for desired social changes to occur. This can be expedited by clearly identifying social expectations to allow for ease of assimilation and integration. Emergency management should follow the U.S. Forest Service's proactive measures to alter a negative behavior and bring awareness to an anthropogenic-based problem. Emergency management should look to incorporate relevant social-psychological factors to formulate effective hazard awareness messaging to bring awareness and alter donations behaviors.
3. Use advancing technology and social media to convey messaging. Global and mobile communications and information-sharing technology and social media are prevalent in most Western and Eastern Societies and are growing quickly in developing nations, so use them to advance and cultivate hazard awareness messaging. Technology and

social media can also be used for research purposes to learn if messaging has been received, interpreted, and responded to in the manner intended. Social media is a powerful communications and information tool. The advantages for emergency management's use of social media include: messages can be disseminated in-real time; feedback from receivers can be instantaneous; sender/receiver communications can be monitored and recorded; messaging effectiveness can be determined instantaneously; and, messaging can be adapted and modified as new information is received and confirmed. The technology used for engaging in social media is relatively inexpensive compared to the potential wealth of information that can be derived from communicating well with others. However, increasing the social media presence should not decrease messaging to and through traditional media channels. The majority of society still watches television, listens to the radio, and reads the newspaper. Thus, emergency management will have to find the right mixture of using traditional and modern information channels to reach the widest audiences.

4. Increase disaster research and monitoring activities. Research and monitoring is the only manner to ascertain the effectiveness of hazard awareness messaging. Emergency management will have to determine if hazard awareness messaging was received and acted upon in the manner the information was intended. Did the messaging get the intended audiences' (i.e., receivers') attention; did the receivers comprehend the information correctly; did the receivers accept the information; did the receivers retain the information; and ultimately, did the receivers respond to the messaging as intended (i.e., did messaging cause a cognitive and behavioral changes).

In addition, there are some knowledge and information gaps in the disaster literature relating to informal material convergence behavior and unsolicited donations that need to be explored. I suggest the following research questions and topics to be explored to help bridge the information gaps:

- What are the reactions of donors to emergency management refusing to accept unsolicited donations for disaster relief activities?
- To what extent do donors accept rationales for contributing monetary donations?
- To what extent are donors aware of the beneficial aspects of contributing monetary donations to disaster relief activities?
- To what extent are donors aware of the negative aspects of contributing material donations to disaster relief activities?
- To what extent are donors aware of nonprofit organizations' donation policies?
- To what extent can hazard awareness messaging help legitimize monetary donations for donors considering charitable contributions?
- To what extent is targeted messaging effective for hazard awareness messaging in non-disaster times?

Emergency Management: Obstacles to Overcome to Get the Message Out

Emergency management has the message content, now it has to effectively convey hazard awareness messaging to the media and the general public. Lindell and Perry (2004) stated that persuasive messaging should get receivers' attention, be easily comprehended, be accepted, be retained, and ultimately cause behavioral change. These authors identified that *message delivery*, *message reception*, and *message interpretation* were just as important as message content. That is, the effectiveness of the message delivering to receivers is just as

important as the persuasiveness of message itself. So no matter how good and persuasive the message is ... it is no good if no one is listening. For emergency management this means correcting two inherent issues in their risk communications: first, public sector emergency management technologically lags behind society; and second, emergency management does not know when information they disseminated has been received and acted upon as intended. These are two important obstacles for emergency management to overcome to get hazard awareness messaging out to the media and public. These two obstacles are explored in this section.

First, based on several years of Federal-level emergency management work in diverse offices across the nation, my observation is the public sector emergency management entities technologically lag behind society as well as its counterparts in the private and nonprofit sectors. To its own detriment, emergency management has been slow to obtain and integrate advancing technologies (i.e., equipment, programs, trained personnel, etc.) into its operations and to its workforce. This technological “Dark Age” places emergency management at a decisive disadvantage at disseminating information and messaging to the public; however, this is not entirely their fault.

Public sector emergency management entities have several challenges to obtain new technology. For example, many entities have limited budgets, outdated purchasing and vendor agreements, non-compatible information-sharing and communication systems, organized labor issues, personnel not properly trained, personnel not physically capable, and/or personnel not willing to learn to operate advancing technologies. Thus emergency management can only keep abreast of advancing technology as finances, knowledge, training, and willingness to learn allows. While public sector emergency management is committed to increase its technology infrastructure, upgrade its equipment, and retrain its workforce to be technologically savvy, the

major problem is that private sector communications and information-sharing technologies advance faster than the public sector can adapt, learn, and integrate into operations. The reality is that even with emergency management's commitment to get better technologically, society and technology advance at a rate that dramatically outpaces the public sector, leaving emergency management even further behind. This obstacle is truly a unique challenge and a problem not easily overcome. However this is not a problem for disseminating information in the modern age. Emergency management can still circulate hazard awareness messaging through traditional media outlets (e.g., television, radio, newspaper, etc.) and also nontraditional methods (e.g., social media, texting, and other mobile communications). This first obstacle should not be used as an excuse for not effectively disseminating persuasive messaging information to the public.

Emergency management has to identify the right forums to effectively convey messaging, then learn how to adapt messaging to effectively convey in traditional and non-traditional media channels and information-sharing sites to reach new or changing audiences. The goal should be to have the right controlled messaging reach the largest audiences, including specific targeted audiences that are possible and practicable. For example: FEMA uses traditional multimedia (e.g., newspaper, radio, television, etc.), internet, social media (e.g., *FEMA on Facebook*, *FEMA on Twitter*, *FEMA on YouTube*, *Twitter*), and mobile resources (e.g., *FEMA Smartphone App* and text messaging) to release news, information, and documents. However, modern communications are now multidirectional, and emergency management has been slow to recognize the larger ramifications of two-way communications in disseminating messages and accepting public feedback as legitimate and reliable responses to messaging.

Second, public sector emergency management does not know if information disseminated to the general public has been received and then acted upon in the manner intended (i.e., *message*

reception and message interpretation). This point was reinforced by FEMA Administrator Craig Fugate, “we’ve [FEMA] been real good at broadcasting information out. But we’ve never been really good at understanding how the public took that information, whether they used it nor did we do a good job of listening to people” (Foy, 2012). Emergency management should begin by listening better to message receivers. Modern communications has moved beyond unidirectional modes, sender to receiver only. With the emergence of mobile resources, social media and instant feedback, modern communications is now multidirectional, multidimensional, interactive, and engaging back and forth between senders and receivers. Social networking provides emergency management new opportunities for disseminating warning and hazard awareness messaging in real-time, as well as receive information and feedback, answer questions, and dispel or correct hearsay, rumors, and erroneous information circulated by traditional and social media (Lindell and Perry, 2004).

Social media is an under-utilized resource for social-psychological researchers, and it can be a useful application for disaster researchers and practitioners. Through social media, disaster researchers and practitioners can actively engage or passively observe individuals’, groups’, and society’s communication, thought processes, and knowledge base on particular issues. Thus, social media is not only a source to disseminate information and receive feedback, it is also an emerging research methodology that can be used to determine the effectiveness of warning and/or hazard awareness messaging. For emergency management to overcome this second obstacle; there is much value in examining social media and accepting public feedback as valid responses to messaging. Public feedback can provide qualitative and quantitative support whether messaging was received or not received, understood or not understood, acted upon as intended or simply ignored. Emergency management should embrace social media for the new

possibilities that this medium provides for disseminating warning and hazard awareness messaging.

In summary, hazard awareness messaging is most effective when it reaches the media and the public. For emergency management to successfully disseminate information and receive the behavioral response desired as their messaging was intended, I believe emergency management must subscribe to the following three principles. First, identify the proper public communications forums that are most appropriate for the messages that are to be conveyed. Messaging should attempt to reach the appropriate audiences; some messages seek to reach the broadest audiences, while others seek only specific target audiences. Second, adjust message content, how messages are delivered, and where information is conveyed in order to adapt to advancing technologies and new communications forums that arise over time. And third, conduct on-going research to monitor, communicate, and assess the effectiveness of messaging with intended audiences. Thus by monitoring and evaluating communications and information-sharing throughout the disaster lifecycle, emergency management can gather intelligence, feedback, and ascertain whether messaging has achieved the desired responses and results and has had the intended impact.

Conclusion: Overcoming Obstacles to Transform the Gift Horse into a Cash Cow

Informal material convergence behavior is a social-psychological problem in social control. There is a social expectation or norm for society members to help disaster survivors; society currently considers unsolicited material donations as an appropriate, prosocial response after disasters. Donors contributing unsolicited donations perceive that they are responding appropriately to prevalent social norms. However this perception is far from the truth. Emergency management has slowly made strides to alter this misperception by working to provide more information to the public. The main effort is made through the internet, mobile

resources, and social media sites. Emergency management websites across sectors are beginning to provide donations related information apps, tabs, and links for donors to make financial contributions and directing donors with materials to go to the National Donations Management Network on a frequent basis. However, gauging by the amounts of unsolicited donations that are still contributed, emergency management has had limited success affecting widespread cognitive behavioral modification to alter informal material convergence behavior.

New approaches are needed to produce paradigm shifts in collective cognitive processes and behavioral prosocial responses to disasters. Emergency management realizes that it cannot continue to manage unsolicited donations in the manner it has in the past. There are fewer and more finite resources available for disaster relief and valuable resources cannot be exhausted on unsolicited donations. Informal material convergence behavior is a solvable behavioral problem; emergency management should make best use of their resources to reduce solve this problem. Hazard awareness messaging, used appropriately, can be effective for cognitive behavioral modification. Salient social-psychological factors can be introduced into hazard awareness messaging to make a persuasive case for redefining prosocial responses and social norms over time. The Forest Service has shown that effective messaging and awareness campaigns can have the desired effect of cognitive behavioral modification through enough time, repetition, and socialization. Smokey the Bear can tell you that wildfires have steadily declined ever since his first appearance in hazard awareness messaging in the 1940s (SDDA, 2010). Thus, emergency management needs to alter their single-minded approach to solving the unsolicited donations problem: that is, reeducate the media and the general public and make them part of the solution to control informal material convergence behavior.

Emergency management should endeavor to integrate the media and general public into the *whole community* approach. The whole community is a collaborative effort to incorporate all relevant stakeholders into comprehensive emergency planning to meet the challenges that disasters present to emergency management. The major challenge here is unsolicited donations. It has been established that donors contribute all types of resources to help disaster-impacted communities recover. However, donors ultimately pay to manage unsolicited donations through private funding contributed to nonprofit organizations. Emergency management should consider the positive impact that informed donors could have on disaster relief. Emergency management needs to focus on educating media and the public to their roles and responsibilities after disasters occur. This is the opportunity for emergency management to use hazard awareness messaging to help redefine what the appropriate types of donations are for donors to contribute after disasters. Donors need to understand that their donations can have positive and/or negative effects on the whole community response. Media and the public should be taught that they are as part of the whole community and society places expectations on them in relation to the larger community. Thus actively involving the media and the public as part of the emergency management “team” is the type of public participation that should be encouraged. Then, over time, I know emergency management can control informal material convergence behavior and reduce the amount of unsolicited donations contributed to disaster relief activities.

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