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Effects of Electronic Media Messages on the Perceived Self-Efficacy of Pedestrian Commuters Living in the Unincorporated Central Florida Community of Conway

Daniel Stephens

EFFECTS OF ELECTRONIC MEDIA MESSAGES ON THE PERCEIVED SELF-EFFICACY
OF PEDESTRIAN COMMUTERS LIVING IN THE UNINCORPORATED CENTRAL
FLORIDA COMMUNITY OF CONWAY

by

DANIEL P. STEPHENS
B.A. University of Central Florida, 2007
M.P.A. University of Central Florida, 2009

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ABSTRACT

Urban pedestrianism is increasingly perceived as a dangerous form of travel. While roadway design has been historically scaled to cars instead of people, planning professionals are now re-thinking their approach to make roads more inclusive for all travelers. Scholars, however, have learned harbored fear can trump behavior even under ideal travel conditions. Such fear can adversely impact perceived pedestrian self-efficacy, which is the self-generated internal assessment or belief in a traveler's agentive abilities to navigate the travel environment. The challenge thus becomes twofold: improve the built environment while bolstering traveler confidence. The following study, therefore, employed a qualitative phenomenological research design to ascertain the concerns and perceptions of vulnerable travelers as it pertained to and was affected by travel-specific media. The study employed denizens selected from the Central Florida community of Conway, who were interviewed using a multi-method approach employing a semi-structured interview technique utilizing individual interviews and small focus group sessions. Using Social Cognitive Theory (SCT) as the theoretical framework, the researcher studied and documented the elements contributing to the perceptions of pedestrian travelers. The rationale for this approach is found in the dynamic relationships that exist between the objective travel environment, the perceived travel environment, and travel behavior – all representing the triad of cognition, the external environment, and social stimuli, which encompass Bandura's Triadic Reciprocal Determinism (TRD). The four themes that emerged from the data analysis – communication, safety, cost, and happiness – characterize the experiences of the participants as they watched positively-themed media images modeling civil travel behavior. This research adds to existing literature on the magnitude such themes have on perception, to include latent

perceptions harbored by pedestrian commuters concerning dangers – real or imagined – of

traveling on local roadways.

I dedicate this labor of love – my dissertation – to my wife, Rhonda. You have been witness to the many issues that have arisen over the past several years, though I am happy to say they passed to become good memories simply because we experienced them together. Without your never-ending support, I know I would have never been able to complete this process. When times were tough and I began to question my ability to continue, your assurances are what kept me going. You are the love of my life – I cannot imagine where I would be or what I would be doing if I was not with you. I love you more than words can say.

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While it may seem counter-intuitive, I would like to give partial credit to the many students in my classes who cheered me on during this process. I always tried to keep them

abreast of my progress – reading them passages when it pertained to our course content – so they could use my example as a model of real-world survey research, or so they might better understand the complexities of serving multiple perspectives in the community. As I was teaching them, I was learning as well; so I thank them for their input into this process.

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LIST OF ABBREVIATIONS

CDP	Census Designated Place	The statistical counterpart of an incorporated place. A concentration of people that identify by a community name, but are not legally incorporated as a municipality. (U.S. Census Bureau, https://www.census.gov/geo/reference/gtc/gtc_place.html)
MPO	Metropolitan Planning Organization	A federally mandated transportation policy-making organization, made up of local government representatives, governmental transportation authorities, and other key stakeholders. The Federal-Aid Highway Act of 1962 required any urbanized area with a population greater than 50,000 to form an MPO as a requirement of receiving federal transportation funding.
MSA	Metropolitan Statistical Area	Metropolitan and micropolitan statistical areas (metro and micro areas) are geographic entities delineated by the Office of Management and Budget (OMB) for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. The term "Core Based Statistical Area" (CBSA) is a collective term for both metro and micro areas. A metro area contains a core urban area of 50,000 or more population, and a micro area contains an urban core of at least 10,000 (but less than 50,000) population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.(https://www.census.gov/population/metro/)
PDI	Pedestrian Danger Index	A term presumably coined by the organization Smart Growth America. PDI is a calculation of the share of local pedestrians who walk to work as compared to the most recent data on pedestrian deaths. (Smart Growth America, https://smartgrowthamerica.org/dangerous-by-design/)
VMT	Vehicle Miles Traveled	The number of miles traveled nationally by vehicles for a period of 1 year. VMT is either calculated using 2 odometer readings or, for vehicles with less than 2 odometer readings, imputed using a regression estimate. (https://www.fhwa.dot.gov/Planning/glossary/glossary_listing.cfm?sort=definition&TitleStart=V)

CHAPTER 1: INTRODUCTION

<u>Overview</u>

One of the more common methods used to study pedestrian commuting is by observing and measuring travel behavior. Over-reliance on using observed commuting behavior to inform transportation-planning decisions, however, can distort important findings concerning traveler perception. While observed behavior can answer questions pertaining to "how" people travel, the perception of the traveler must be considered in order to understand "why" or perhaps more importantly "why not". The research that follows seeks to examine how positively-themed media content – as qualified by the inclusion or omission of certain thematic elements – asserts sway over traveler perception. It suggests this manifests as a predictor of walking behavior, perceived self-efficacy (Anable, 2005; Bandura, 1994; Gonzale, 2015; MacEachren, 1980; Mendoza, Cowan, & Liu, 2014; Mfinanga, 2014; Peer, 2014; Powell, Martin, & Chowdhury, 2003).

<u>Study Background</u>

Perceived self-efficacy is a self-generated internal assessment of whether or not one can produce given levels of attainment despite varying degrees of difficulty – the strength of belief in one's ability to complete a task and/or achieve a goal (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Dahlstrom, Dudo, & Brossard, 2012; Gist, 1987; Jago, Sebire, Edwards, & Thompson, 2013). In the case of pedestrian travelers, it pertains to the belief in a traveler's agentive abilities to navigate the surrounding environment, which includes factors such as the stamina to walk a particular distance or being able to overcome perceived hazards or a strenuous

travel environment. It combines an affirmation of capability with the strength of that belief (Bandura, 1997).

The aforementioned predictor of walking – self-efficacy – is grounded in perception; and people's perceptions have been found to be impacted by mass media (Abioye, Hajifathalian, & Danaei, 2013; Cavill & Bauman, 2004; Moeller, de Vreese, Esser, & Kunz, 2014). While it can be argued the true measure of the effectiveness of media is the degree to which it influences a targeted audience (Ball-Rokeach & DeFleur, 1976; Cavill & Bauman, 2004; Mogg & Enis, 1974; Wirtz, 2009), media can nonetheless convey conflicting messages, exerting influence over multiple audiences albeit in different ways. Take, for example, road safety campaigns. Some campaigns portray horrific traffic scenarios, presented in a deliberately sensational manner. Such advertisements are designed to appeal the viewer's senses in order to educate travelers about the consequences of unsafe, irresponsible travel behavior; to frighten them into compliance with traffic laws. Hoekstra and Wegman (2010) write, "there is a firm belief in the ability to 'scare people straight'. The idea is that when fear is aroused, people will become more motivated to accept the message and recommendations presented in a campaign" (p. 82).

While media campaigns have been a "mixed bag of results" (Hoekstra & Wegman, 2010, p. 83) some have been found to be somewhat effective at changing driving behavior in the aggregate (Guttman, 2015; Hoekstra & Wegman, 2010; Yanovitzky & Bennett, 1999). This helps to explain why these ads continue to be utilized (Hoekstra & Wegman, 2010), multiplying into a diverse range of topics – such as texting and driving, driving under the influence of drugs or alcohol, seat belt use, driving while drowsy, and the like – presented in various streams of media. Given the moderate success of affecting the behavior of motorists, the approach has been

cautiously expanded (Hoekstra & Wegman, 2010) to include problems germane to non-motorized modes of travel.

Over the past two decades the State of Florida has been haunted by consistently high numbers of pedestrian casualties, relative to other states in the nation (U.S. Department of Transportation, 2015; Anderson et al., 2014). For instance, in 2013, Florida ranked 2nd (behind only Delaware) in the number of pedestrian fatalities per 100,000 population with 2.56; 2nd in the overall number of pedestrian fatalities with 501 deaths; and 3rd in total traffic fatalities with 2,407 (U.S. Department of Transportation, 2015, p. 8). In recent years, however, state policymakers and administrators have joined forces in a concerted effort to find a remedy to the problem. Now the issue of pedestrian safety is a top priority in the State (Florida Department of Transportation, 2015; Metroplan Orlando, 2016). To address the issue, several programs have been created and implemented in select cities around the State, all sharing the goals of raising awareness of problems affecting active commuters, while educating both motorists and pedestrians alike in a multi-faceted approach (Florida Department of Health, 2012). Some programs, like the National Highway Transportation Safety Administration's (NHTSA) program *Everyone is a Pedestrian* have embraced an approach showing positive messages of cooperation between travelers and emphasizing equity for all road users (U.S. Department of Transportation, 2014). Others, however, continue to embrace the previously mentioned sensational approach.

One of the more common tactics used by law enforcement to achieve greater compliance traffic laws is the traffic "sting". Traffic stings are used in a variety of ways and for a variety of purposes, but one particular type of extreme sting uses law enforcement officers as pedestrian decoys at marked crosswalks. The *de facto* manual for guiding law enforcement agencies in such an endeavor is the U.S. Department of Transportation's NHTSA handbook *Pedestrian Safety*

Operations: A How-to Guide (2014), which offers suggestions on how to coordinate every aspect of the operation. The basic scenario would have a plain clothed police officer feigning an attempt to cross a busy roadway, all in the effort to observe and cite motorists who fail to yield the lawful right-of-way to pedestrians. According to Florida law, drivers must yield the right-of-way to pedestrians if the pedestrian has but one foot in the roadway (Fla. Stat. § 316.130, 2016). To be fair, pedestrians are prohibited from suddenly walking into the path of a vehicle "which is so close that it is impossible for the driver to yield" (Fla. Stat. 316.130(8)). In these carefully constructed and monitored scenarios, however, if a motorist fails to stop for the officer, they can receive either a warning or citation (at the officer's discretion). A second officer, working in coordination with the first officer issues the warning or citation, and often takes the opportunity to educate the motorist as to the demands of the statutes.

A typical outcome is that the officer attempts to cross the road, the motorist fails to stop, the officer retreats back to the same side of the roadway unharmed, and a second officer addresses the offense with the motorist. While the point of the exercise is to elicit instances of irresponsible motorist behavior – in a controlled environment – in order to address them forthwith, it nonetheless tends to put the law enforcement officer in harm's way, as "failure to yield the right-of-way" often means the car passes dangerously close to the unprotected officer standing in or near the travel lane.

To enhance the effectiveness of the operation, organizers usually invite local news crews and/or other service-oriented organizations to film the event and broadcast it as a public service or for educational purposes. Not only are local motorists made aware of the law enforcement initiative, but they also gain a better understanding of laws that pertain to the interaction between motorists and pedestrians. Though the event is carefully monitored in order to ensure the safety of

the officers and is staged by experts trained in traffic safety, the media images can still be alarming, as even perceived danger can be a deterrent to pedestrians watching the broadcast (Clayton & Musselwhite, 2013).

While, according to the NHTSA such media spectacles have been found to "significantly increase driver yielding" (U.S. Department of Transportation, 2014, p. 1), it is the contention of this study that using media to broadcasts such events can have the unintended consequence of undermining the perceived self-efficacy of pedestrians as they endeavor to navigate what can actually be an objectively measured, sound travel environment[1]. This is especially true if the media message's negative imagery exacerbates any pre-existing fears that are harbored by the pedestrian, such as the fear that unlawful behavior by motorists is typical and/or deliberate (Glassner, 1999; Smith, P. & King, R., 2013; Taubman-Ben-Ari et al., 1999). Regrettably, any fears that are ostensibly intensified by the aforementioned broadcasts are potentially compounded as those messages are reinforced via other media. For instance, children's cartoons, network broadcasts, advertisements, and Internet memes can serve to perpetuate a culture of unsafe behavior surrounding vulnerable road users for the sake of sensationalism (Altheide, 2013; Glassner, 1999; P. Smith & King, 2013).

Nowhere is the struggle greater than in Central Florida. Since 1997, annual studies published by the nonprofit organization *Smart Growth America* have consistently placed Central Florida (specifically the Metropolitan Statistical Area (MSA) of Orlando-Kissimmee-Sanford) at or near the top of its list of the "most dangerous places to walk" in the United States, as ranked by

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[1] The phrase "objectively measured sound travel environment" implies the area in question has been evaluated according to an algorithm that factors in such elements as the travel lane width of nearby roadways, the presence and frequency of heavy vehicles, the presence of a landscape buffer, on-street parking, the posted speed limited, and the like.

Pedestrian Danger Index scores[2] (Anderson *et al.*, 2014, p. 3). Seven other Florida MSAs share the unfortunate distinction of being ranked in the top ten, meaning eight of the most dangerous localities for pedestrians in the entire United States are all found within the State of Florida. And, as the previous paragraph alludes, these stark statistics, combined with any negativity broadcast in mass media may serve as the possible sources of the "pre-existing fears that are already harbored by the pedestrian".

Transportation professionals have been working steadily to improve the travel culture in Central Florida by enhancing the built environment via modifications to the physical infrastructure. Arguably, these steps have resulted in a travel environment that has in-fact become increasingly more inclusive of other road users. Notable increases in the local inventory of pedestrian/bicycle/transit facilities are apparent as one peruses the local metropolitan planning organization's (MPO) Transportation Improvement Program (Metroplan Orlando, 2015) or similar documents of the local governments. The increases are presumably resultant of changes in the priorities of local and state transportation policy makers (Metroplan Orlando, 2014a), combined with increases in funding of Transportation Alternatives[3] programs at the federal level (MAP-21, 2012), and/or public outcry from the citizenry (Wright, J., 2014). Nevertheless, fears associated with a perceived car-dominated culture remain. This is significant because on the occasion when a pedestrian must decide whether or not travel conditions are optimal for walking,

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[2] The average annual pedestrian fatalities per 100,000 people divided by the number of commuters who walk to work.

[3] Formerly Transportation Enhancement (TE) activities, Transportation Alternatives (TA) consolidated the Safe Routes to School (SRTS) program and the Recreational Trails program (RTP) to create the Transportation Alternatives Program (TAP) of the nation's current transportation legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21). According to the Transportation Alternatives Data Exchange (TrADE), Transportation Alternatives are funding for bicycle and pedestrian transportation, for the preservation and enhancement of many of the nation's scenic and historic assets, and to address and protect environmental systems that are inextricably linked with America's transportation infrastructure.

it has been shown that perceived fear can trump the desire and/or necessity of utilizing a particular travel environment, even if that travel environment is sound (Ferrell, Mathur, Meek, & Piven, 2011; Lutz, 2015; Ma, Dill, & Mohr, 2014; Mullen, Tight, Whiteing, & Jopson, 2014; Muraleetharan et al., 2005; Tao, 2010). Moreover, even imagined discomfort with the travel environment can diminish pedestrian confidence in the integrity of the physical environment (Clayton & Musselwhite, 2013). Thus, the challenge for transportation professionals becomes twofold: improve the built environment by way of modifications to the physical infrastructure, while simultaneously bolstering traveler confidence in the same.

This research, therefore, seeks to add to the existing field of knowledge as it pertains to the effects of mass media. Specifically, the research strives to ascertain how the content of media affects the confidence of viewers – both walkers and non-walkers alike – in order to identify factors that increase perceived self-efficacy, thereby encouraging walking. Ultimately, the researcher hopes to aid planning professionals tasked with changing the travel culture in Central Florida and other similarly situated communities.

Problem Statement

A 2014 study on another form of active transportation – bicycle riding – discovered that having an objectively measured good travel environment is "necessary but not sufficient" (p. 1135) to entice people to utilize travel facilities while riding their bicycles[4] (Ma, Dill, & Mohr,

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[4] It should be noted that, though the Ma, Dill, & Mohr (2014) study pertained specifically to bicycle commuters, cyclists nonetheless share many similarities with pedestrians, particularly the fact that both are categorized as vulnerable road users (Roge, El Zufari, Vienne, & Ndiaye, 2015; Valero & Puerta, 2014; Vanlaar et al., 2016).

2014). Though the study area (Portland, Oregon) is reputed[5] to have an extensive network of active commuter travel facilities – such as bike lanes, recreational trails, and sidewalks – that have long-been implemented to encourage bicycling, the presence of those facilities nonetheless failed, in some way, to entice riders to "reap the full potential of planning and design policies" (p. 1135). While the literature reflects a well-established correlation between the built environment and behavior (Khan, Kockelman, & Xiong, 2014; Ma, Dill, & Mohr, 2014; Munshi, 2016; Yu, 2015), the study found that many people – even in those living in "bike-friendly[6]" communities – choose not to ride for transportation. This finding led researchers to believe that other factors besides just the built environment had an adverse impact on behavior. Specifically, it was discovered in some instances traveler perception of the environment had a greater effect on cycling behavior than the actual, objective environmental conditions (Ma, Dill, and Mohr, 2014). This finding was paramount in a study designed to discover impediments to bicycle riding, in that it affirmed the power of people's perception over the reality of the build environment. Moreover, researchers determined coupling infrastructure improvements with an intervention would function to improve people's perception of the travel environment, which could potentially increase the likelihood those study subjects would ride their bikes on public roadways.

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[5] Portland is consistently designated a "Platinum" level Bicycle-Friendly Community by the League of American Bicyclists organization – the largest advocacy organization for general cycling in the nation.

[6] Bicycle- or bike-friendly are not merely colloquial terms, but are actual distinctions bestowed by the League of American Bicyclists organization.

Theoretical Framework: Social Cognitive Theory

This study recognizes the dynamic relationships that exist between the objective travel environment, the perceived environment, and travel behavior. Therefore, the study worked within the framework of Social Cognitive Theory (SCT), as SCT posits behavior constantly influences and is being influenced by a "triad of cognition, the environment, and social stimuli" (p. 50) – all three of which encompass Bandura's Triadic Reciprocal Determinism (TRD) (Burnett, Enyeart Smith, & Wessel, 2016). This TRD model runs counter to the idea that human behavior can best be explained in terms of "unidirectional causation" (Bandura, 1999, p. 6), where behavior is affected by environmental and/or internal influences, while the latter two are supposedly not affected by the former in the same manner. This last point is important in that it suggests that each of the three elements has a definite effect on the other two.

Bandura (2001a) suggests that because of the degree to which mass media influences society, it is important to understand the psychosocial mechanisms that allow symbolic communication to influence people's thoughts and actions (p. 265). People are not merely reactive organisms, shaped by external events. They are autonomous creatures: adaptation and change are embedded in them. Together, people are the producers as well as the products of social systems.

At the core of SCT is the idea that learning is an ongoing process – a continuous and dynamic interchange of personal, behavioral, and environmental influences. Pastorino and Doyle-Portillo (2013) describe the interaction as follows.

> We choose to place ourselves in certain environments and these environments then influence our behavior and the way we think. However, the way we think—our attributions, goals, values, and perceptions—may guide which environments we choose to be in as well as the behavior we exhibit. Our behavior, in turn, may

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change the environment as well as the way we think. All three variables influence each other in a reciprocal manner (p. 479).

Social Cognitive Theory studies

The SCT framework has been used in numerous studies that pertain to self-efficacy. For instance, Infinedo & Usoro (2016) studied students' intentions to continue using blogs by using social-cognitive factors, including "knowledge self-efficacy, personal outcome expectations, perceived support for enhanced social ties, and intention to continue using blogs" (p. 14). In this study, the authors described the personal factor – knowledge self-efficacy – in terms of an individual's interactions with other learners: They possess enough confidence in their own abilities to provide useful information to others. Another personal factor – personal outcome expectations – hinted at the belief of the individual, as to what they might expect from the experience. The external factor – perceived support for enhanced social ties – connected the student with his/her colleagues for the sake of networking and collaboration. Lastly, the intention to continue blogs was indicative of behavior. By striving to better understand the relationship between the various factors, the authors were able to create a basic predictive model of behavior that informed their field.

In 2001, Albert Bandura *et al* found that children's perceived self-efficacy was a major determinant of perceived pre-occupational self-efficacy (as it pertains to children's future professional aspirations), even over actual academic achievement and ability (p. 187). The findings of Bandura *et al* study noted, "The impact of parental self-efficacy and aspirations on their children's perceived career efficacy and choice is, in turn, entirely mediated through the

children's perceived efficacy and academic aspirations" (p. 187). Bandura's finding about self-efficacy shed light on the power of belief and perception, even over other powerful factors, which in this case were parental self-efficacy and aspirations.

Nowak and Krcmar (2003) utilized SCT to make predictions about the relationship between computing self-efficacy and perceptions of computing careers, as well as the relationship between general media use and confidence in utilizing computers. The general conclusion of the research was that "computer self-efficacy was positively related to positive perceptions of a computing career" (p. 1); however, the authors observed that while advanced computer users had greater self-efficacy than their counterparts, it did not necessarily translate to positive career perceptions. Regarding those students who took a technology class – thus interacting with other like-minded students: The additional interaction in the class setting did not affect the perception of computing careers. However, comparing the literature to the structure of this dissertation, the findings of the 2003 Nowak and Krcmar study that participants who used media in a deliberate, intentional manner[7] "experienced a greater sense of…self-efficacy" (p. 8).

Noting individuals aged 18-25 had historically been largely apathetic toward the political process – usually demonstrating low levels of political engagement – Hayes (2010) used SCT as a theoretical guide to see how the winning campaign of the 2008 Presidential election viewed a person's feeling of political efficacy[8] as a determinant of political participation. Such studies demonstrate the reciprocal relationship between two determinants of SCT: personal and environmental factors.

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[7] Deliberate and intentional, as opposed to casual computer use. The first would most certainly pertain to professionals or aspiring professionals who use their computer for more than merely socializing or completing light projects.

[8] The confidence that one can both effectively participate in and influence the political process (Hayes, 2010).

Triadic Reciprocal Determinant schema

The schema of TRD (as illustrated in Figure 1) illustrates how each of the determinants has a reciprocal relationship with the other two. Note that each determinant is labelled for clarity according to the factors that pertain specifically to the study.
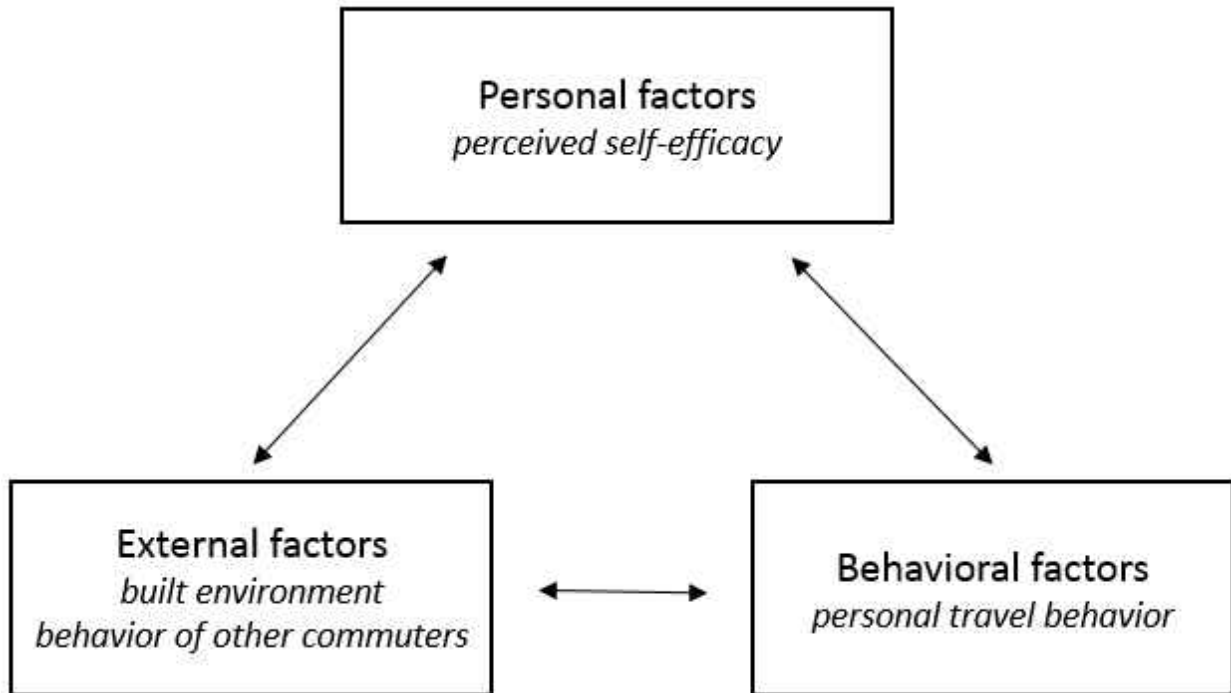
Figure 1: Conceptual model of the determinants of Triadic Reciprocal Determinism (TRD).

Determinants of TRD

Personal factors

Personal factors typically comprise peoples' knowledge, expectations, and/or attitudes. As it pertains specifically to this study, personal factors equate to one's perceived sense of self-efficacy. Perceived self-efficacy, in this case, is best described as the mental images, beliefs, and

perceptions that combine to affect one's confidence in the travel environment, as well as the belief in one's agentive capabilities. It represents the degree to which one can produce given levels of attainment, which is an affirmation of a capability level and the strength of that belief. It further includes one's interpretation of laws that govern commuters, as well as the trust an individual may have concerning the ability of other travelers. It should be noted, however, that a person's perception of reality does not always reflect what actually exists.

Environmental factors

The environmental factors of TRD range from social norms to the travel environment. Social norms represent the paradigms that guide behavior by way of informally establishing the expectations of the travel community in a general sense. They reflect unspoken agreement – though not necessarily consensus – by most members of a community. The travel environment, as it applies to this study, is not limited solely to physical infrastructure features and facilities, but is also inclusive of policies and laws that guide road users, as well as the behavior of the other road users. Factors outside the control of mankind, such as humidity and/or inclement weather also fit within the framework of environmental factors, especially as their presence exerts some degree of influence on human travel behavior.

Behavioral factors

Behavioral factors are skills, actions, or habits. In the case of this study, behavioral factors represent how a traveler performs under given circumstances, the choices one makes as he/she commutes, and the manner by which that traveler interacts with other travelers. The behavioral factors are the manifestation of the personal (internal) and environmental (external)

factors, after a traveler's mental processing has completed.

TRD interaction

Relying on the above three determinants as the foundation for the theory, the interaction (i.e. the relationships) between the three can be described in terms of how this study viewed their functions according to a scenario involving three factors of a hypothetical traffic event: a pedestrian, another traveler, and an intersection.

> Assume that a pedestrian initially harbors a perception of uncertainty in his/her ability to traverse the travel environment. A fear exists that the travel environment is auto-centric[9] or, at the minimum, a dangerous environment for pedestrians. This belief may be rooted in past observations of the behavior of others (via first-hand account or media), knowledge of actual policies or laws governing travel, or simply the report (erroneous or otherwise) by other trusted individuals: nonetheless, the perception exists and it represents the *personal factors* of Bandura's TRD.

> As the pedestrian approaches a marked crosswalk within an intersection with 4-way stop signs and prepares to cross, a motorist arrives. The pedestrian – though lawfully within his/her right to cross first – yields to the motorist, waving to the driver to proceed first through the intersection. This act represents the *behavioral factors* of the TRD and demonstrates how the personal factor of uncertainty, manifest as a low perception of self-efficacy, affects behavior. As the motorist obliges and proceeds first through the intersection, however, this act can have the power to reinforce the perception of auto-centricity in the pedestrian and so it is an example of how *environmental factors* affect personal factors, while being affected by behavior.

As was presented, one's sense of perceived self-efficacy interacts with behavioral factors starting with the belief as to whether or not one can actually accomplish a task, such as navigating a corridor in collaboration with other travelers. Referring back to the examples of the Study Background section, regarding the positive and negative thematic messages found within

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[9] Auto-centricity is the belief that the policies and designs of the travel environment and behaviors of fellow travelers are skewed in the favor of motorized vehicles; suggesting a preferred mode of transportation.

media that targeted travelers: The message of how roads will be made safer when motorists are held accountable for their actions (i.e. via law enforcement that cites them for their failure to yield the right-of-way) may be lost to a pedestrian viewer. While not necessarily the presumed intent of the message, pedestrian viewers may overlook the intended message and instead infer from the harsh elements that harm may occur, even when a traveler is acting in a lawful manner.

Among the central assumptions of this study were that the Central Florida region continues to be perceived as an unsafe travel environment for pedestrians and that certain thematic elements embedded in mass media messages perpetuate this idea, all of which then becomes a deterrent to travelling by foot. Social Cognitive Theory starts with the premise that people acquire at least some of their knowledge by observing and modeling the behavior of others (Bandura, 1997). This is accomplished through interpersonal imitation, vicarious experiences, media sources, or written/verbal/non-verbal forms of communication, using as decision-making criteria the consequences or rewards that result from the modeled behavior. For instance, the decision a person makes about whether or not a modeled behavior is replicated is initially contingent on whether that behavior is perceived to be rewarded or punished. Furthermore, the absence or presence of reinforcement, post-observation, is also a strong determinant as to whether or not the individual continues to model the behavior, or whether the behavior falls off (Allin, 2005; Bandura, 1997; Bandura, 2001).

Given the applicability of SCT to the research questions for the study (as shown below), the framework cited was used to assess the relationship between the thematic elements of media and the TRD determinants (See the illustration in Figure 2).
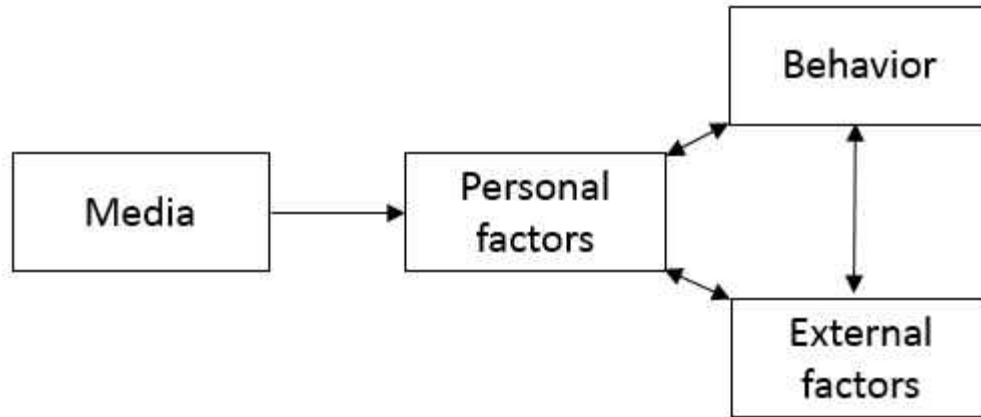
Figure 2: Conceptual model of the relationships between media and the determinants of Triadic Reciprocal Determinism

Research Questions

The primary research question for this study is, "Might positively-themed media images that model civil travel behavior serve to enhance commuter self-efficacy?" Framed another way – so as to incorporate the phenomenological aspect of the research – one might rephrase the question as, "What was the experience of the pedestrian and/or potential pedestrian as they watched positively-themed media images that model civil travel behavior and did doing so enhance the commuter's perceived self-efficacy?" However, allowing the aforementioned Ma, Dill, and Mohr (2014) findings – coupling infrastructure improvements with an intervention – to inform this dissertation, a subordinate research question was developed to guide the researcher in the identification of underlying issues that could contribute to a more comprehensive understanding of the primary research question. That question pertains to implementation: "Might broadcast media function as a proxy for an intervention as was previous discussed?"

To address these questions, the researcher administered semi-structured interviews with denizens (both individually and in small focus groups) living in and around the Conway Census

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Designated Place: an established, conventional suburban community chosen from within the unincorporated area of the tri-county (Orange, Osceola, and Seminole) region of Central Florida. The study sought to examine the relationships between the objective travel environment, the perceived travel environment, and travel behavior through the lens of various thematic elements embedded in electronic media messages as experienced by the pedestrian traveler. The researcher controlled for residential self-selection, which in this case was constituted and manifested as any pre-existing preferences for urban design that draw people to a particular community, and which have been found to contribute to associated behaviors (Cao, Handy, & Mokhtarian, 2006; Lamont, 2001; Lund, 2003). The assumptions of Social Cognitive Theory (SCT) guided the study in order to explain the aforementioned variables within the framework of the triadic reciprocal relationships that exist between the objective (external) environment, perceived (internal) environment, and personal behavior.

Limitations and Delimitations

The sample of denizens selected for this study was drawn from in and around a single community – the Conway Census Designated Place. To enhance the richness of the findings, the researcher eliminated residency as a prerequisite of the study, allowing those persons classified as "homeless" to participate. This was the rationale for using the term denizen in lieu of the terms citizen or resident. The study participants were denizens from all walks of life according to most major demographical categories (e.g. race, sex, religion, social-economic standing, age, etc.) as those categories are generally reflected in the study area. At this point it should also be noted the researcher was careful to include pedestrians and non-pedestrians alike into the study

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in order to mitigate for confirmation bias. In this case, pedestrians were considered those who walk regularly (or even infrequently) along the local roadways of the community while commuting to/from two or more destinations; or, those who walk or run for leisure or exercise. The emphasis on the qualifications of being a pedestrian were not necessarily focused on the regularity by which a person walked, but merely their familiarity with walking conditions as it pertained to the greater local community. Conversely, non-pedestrians were those who were not as inclined to walk for any reason around the community, though the distinction of being a non-pedestrian did not preclude their awareness of any issues associated with pedestrian travel.

Given that news outlets in and around Central Florida frequently broadcast stories concerning the hazards of walking or bicycling (presumably because stories that pertain to pedestrians are prevalent in the area, hence the reason for their inclusion in news programs), the researcher found it difficult to discover any commuter who had not been exposed to such stories or to news reports concerning the ranking of the Central Florida area as one of the most dangerous places in the nation for walking. For this reason, it was assumed that all respondents had pre-formed perceptions of the walking environment in and around Central Florida as being dangerous to some degree, with the only distinction being their personal experiences with the same, as determined by their qualification as either a pedestrian or non-pedestrian.

Because the crux of the researcher's argument was to discover the effect(s) of electronic media messages on the perceived self-efficacy of pedestrians – specifically, the effect(s) of the inclusion of positively-themed media elements in those messages – a certain degree of confirmation bias was anticipated. However, steps were taken by the researcher to mitigate for this bias. For instance, the researcher was careful to withhold judgement (verbal or otherwise) about the video shown during the interview process – allowing the respondent to form his/her

own opinion about the content. Furthermore, the researcher masked any suggestion of bias with regards to his opinion as to the perceived safety of walking within the confines of the study area.

It was assumed that they would answer questions truthfully and that they were not biased by any personal agenda. Nonetheless, the relatively small sample size used in the study still yielded quality responses and was representative of many fringe and suburban pockets of the population of active commuters originating from within the Central Florida area.

CHAPTER 2: LITERATURE REVIEW

Overview

The literature review is divided into two main sections. The first section begins with a summary of the evolution of transportation innovations and their effects on urban design, as well as on perceived self-efficacy and the perception of time/distance to travel. Next is a discussion of studies immediately applicable to the research, specifically those that pertain to the manner by which human perception and behavior are affected by mass media. The chapter concludes with a discussion of the contributions of the study.

A Walk through History: Changes in Commute Habits in the New World

Commuting by foot. Noting that historical literature makes no mention of the existence of any mechanized, land-based conveyances or other transportation technologies prior to the 18th century, this study begins with the assumption that the primary mode of transportation for the majority of people in the New World[10] was walking (Rodrigue, 1998). Arguably, horses and animal-drawn conveyances were utilized by those able to afford the expense of upkeep, but barring those instances, people generally walked for local trips (e.g. to and from work, school, worship, or socializing).

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[10] The New World is a colloquial term describing the land of the North American continent, which was (presumably) previously undiscovered by European settlers until 1492.

With 14 of the 15 colonies of North America[11] being under British rule until after the War

for Independence (1776-1783), King George III was able to limit the forms of commerce in which

the colonists could engage; so as to stifle any unfair competition colonial enterprises might have

over English industries and agriculture[12]. Subsequently, the southern colonies were primarily

agrarian, the middle colonies were limited to subsistence farming, and the northern colonies to

ship building and the slave trade. "The colonial craftsmen…was the quintessential worker"

(Rockman, 2007, p. 1022). Because a vast many of the workers in the land were what, today

would be considered "self-employed", formal, competitive industry was sparse, so walking to

commute was minimal (p. 1022).

In the early years of the nineteenth century, war in Europe inadvertently spawned an

industrial revolution an ocean away in the United States (Gunderson, 2007). Because the conflict

between England and France frequently disrupted trans-Atlantic commerce, on which the

fledgling nation was dependent after the first war for independence, access to European

manufactured goods became severely limited (Gilje, 2010; Hickey, 1981). This isolation created

an urgency for the U.S. to possess the ability to produce goods domestically, which in turn

hastened the proliferation of American factories (Gunderson, 2007). As wave after wave of

immigrants flooded the nation (Schultz, 2011) – secure in the fact the U.S. had successfully

thwarted two threats to its independence (Kastor, 2014), and encouraged by prospect of abundant

jobs in its factories (Schultz, 2011) – the nation's major urban centers were soon burgeoning with

workers (Schultz, 2011). These events became the genesis for a fledgling form of urban

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[11] Most people think only of the thirteen colonies that joined to form the United States, though Florida and Canada were also colonies – they simply did not join with the other colonies at the end of the War for Independence.

[12] The colonies, especially the southern colonies, were established as commercial enterprises, founded by England to compete with other European powers. Any commerce in which the colonists engaged was routed through England.

pedestrianism[13] in the United States, whereby workers began commuting from their homes to local factories or other places of work in a regular regimen (Mikovsky, 2012; O'Byrne, 2009).

During the early years of the nineteenth century, workers lived close to the factories and other urban places of employment, if only because the dominant forms of land-based transportation were still walking and/or riding horseback (Southworth & Ben-Joseph, 2003). Because of this, streets were scaled to widths that accommodated the slow speed of pedestrians[14] and were sized for horse-drawn carts and wagons, all of which resulted in noise levels that paled in comparison to the loud machines that would eventually begin to move travelers from place to place. This was a period when the percentage of pedestrian traffic on roadways was the greatest as compared to any other mode. Because of this, traveler perceived self-efficacy was limited only by the occasional interaction with horses and/or carriages.

Subsequent to the fast rising population around the industrial urban centers, densities tended to outpace planning efforts. As Southworth and Ben-Joseph (2003) explain, an "exploitation of street space arose in the absence of any regulations or restraints to manage the environmental impacts from the growing population" (p. 66).

Innovations in transportation technology lead to changes in urban planning

In response to the street-level chaos that was building in the larger cities, public

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[13] Pedestrianism and urban pedestrianism differ in meaning. NPR (2014), citing Matthew Algeo's 2014 book *Pedestrianism: When Watching People Walk was America's Favorite Spectator Sport,* describe pedestrianism as the "competitive walking matches" (np) that occurred in the late 19th century (Algeo, 2014). Urban pedestrianism is a term describing the task of walking through a congested metropolis; and includes elements of safety due to social segregation (O'Byrne, 2009).

[14] Pedestrians typically travel at 3MPH (Washington State Department of Transportation, 1997; Easa & Cheng, 2013; Kelly, Murphy, Oja, Murtagh, & Foster, 2011; Vieira et al., 2015)

transportation systems soon began to appear. In 1826, Gilbert Vanderwerken established a dedicated horse-drawn omnibus service for passengers wagons pulled on streets (not rails) in the city of Newark, New Jersey. Soon thereafter, in 1832, New York City installed the nation's first streetcar system. Because streetcars run along steel rails, instead of existing roadways, the vehicles move quicker (due to less friction) and thus offer a faster service for passengers.

Over time, electric trolleys and trams eventually replaced the motorized streetcar systems. The electric systems were similar to their predecessors though they moved passengers faster. By 1895, there were nearly 900 electric street railways with more than 11,000 miles of tracks in the United States (Smithsonian Institute, 2017).

One notable drawback to the new public transportation systems was the increased noise they produced. While the benefits of being able to move multiple riders to greater distances was apparent, an unfortunately side effect is the noise produced by rail-based conveyances is considerably higher than other modes – a problem that continues to this day (Rapoza, Barberio, Fleming, & Boeker, 2009). This fact adds to the claim by researchers that the presence of heavy, loud, and fast vehicles within the travel environment is alarming to vulnerable road users, which can diminish perceived self-efficacy (Smith, A., 2008)[15].

Another outcome of the mass utilization of streetcar systems in the U.S. was that, for the first time, people were afforded the widespread ability to live outside of cities and commute to work. Where earlier generations of workers who commuted to work by foot were limited by distance, they were now able to commute from farther distances away. This was an important

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[15] According to the website of Major League Baseball (2017), the predecessors of the Los Angeles Dodgers franchise, the Brooklyn Dodgers, was originally known as the "Trolley Dodgers", "due to the complex maze of trolley cars that weaved its way through the borough of Brooklyn" (paragraph 3, 2017).

achievement to the larger cities in the U.S., especially those cities that received the large influx of immigrants throughout the nineteenth century that were now burgeoning with residents who were often crammed into tenement housing (Garb, 2003; Puck's, 1879; Schultz, 2011). With public health issues on the rise, subsequent to inadequate living conditions, and with the increasingly noisy environment of the cities, workers fled to the periphery once these new transportation systems allowed (Miller, 1982). And, as was previously noted, while these new transportation systems offered many features that were disruptive to the harmony of the pedestrian-level street environment, the appeal of being able to work locally while living elsewhere apparently trumped most objections.

The last, and perhaps most impacting of the land-based transportation technologies of the nineteenth and twentieth centuries was the automobile. When motor vehicles began to appear on American roadways in the 1890's, Southworth and Ben-Joseph (2003) report that a nationwide road census in 1904 found a little over two-million lane-miles of improved roadways, which meant roadways surfaced with either stone or gravel, as opposed to dirt. Though they numbered but a mere 8,000 vehicles in 1900, that number quickly grew to around 8-million cars by 1920 (Southworth & Ben-Joseph, 2003) and steadily increased in sales – excepting for the years of the Great Depression.

Automobiles offered many benefits not found with public transportation. No longer were commuters beholden to transit schedules, as they could now travel at-will. Carrying cargo was no longer an issue. Cars could be parked relatively close to both the origin and the destination, negating the necessity to walk to and from a transit stop. Even the safety of occupants (as it related to interactions with other) and the privacy afforded by a car were benefits.

Most of all, the versatility of the automobile caused its popularity to soar, for the most part, which put considerable pressure on the federal government to aid in the development of the new industry. Moreover, the new found freedom of travel, combined with housing reform initiatives that were designed to address problems associated with overcrowding and the poor living conditions found in cities, ushered in many major changes in urban design that would alter how and where people live and how they commute (Frank, Engelke, & Schmid, 2003).

Transition from urban to suburban living

Prior to the Second World War (WWII), residential neighborhoods were typically located in urban areas or on the immediate periphery. Barring any natural features that disrupted the pattern, the prevailing street grid design of these "traditional" neighborhoods was laid out in squared blocks with relatively straight streets and 90° intersections when at all possible, as this design enhanced accessibility while being more understandable to travelers because of its predictability (Sun & Lovegrove, 2013). Moreover, the Sun and Lovegrove (2013) study points out that a key benefit inherent in the grid network of streets and sidewalks was that it dispersed and distributed motorized traffic over multiple streets, a positive externality that made walking and bicycling trips practical as well (p. 35). Nonetheless, problems of failing public health and high crime, related to overcrowding in the cities, started a slow shift of people desiring to move to the fringe.

The report by Edmonston and Davies (1976) studied population suburbanization starting from the turn of the 20th century and found gradual migration from urban centers to the periphery from 1900 to 1930 (Edmonston & Davies, 1976) (p. 398). The passing of the National Housing Act of 1934, however, hasten the shift, prompting a virtual exodus – "urban flight" – from the

cities, as the combination of this new mortgage finance mechanism and the flexibility of automobiles made suburban living an attractive alternative to city life (Ballard & Fuguitt, 1985; Edmonston & Davies, 1976; L. Frank, 2005). The previously mentioned Edmonston and Davies study reported that growth of the urban areas slowed by nearly half from 1940 to 1960, purportedly losing any growth to the suburban areas outside the metropolitan areas (Edmonston & Davies, 1976). By the 1970's, Ballard and Fuguitt (1985) noted "the increase in the rate of nonmetropolitan population growth…as a veritable turnaround in population patterns" (p. 99), as compared to prior decades.

Cultivating a car culture

The shift of the population from living in urban areas to suburban communities, post-World War II, was significant, not just because of where people lived, but how they travelled. The conveniences and/or benefits offered by automobile usage was a two-edged sword, as people began commuting greater distances resultant of their choices for where they chose to live. And, while this may have been the point of living outside of the city, the greater distances people travelled resulted in an increased automobile dependency (Badger, 2014; Ewing, Schmid, Killingsworth, Zlot, & Raudenbush, 2003; Frank, Engelke, & Schmid, 2003; Putnam, 2000).

Communities began to be scaled, not to a human scale, but to the automobile. Residential areas were no longer being styled in the traditional grid design, as they were pre-WWII, but as single-use land development patterns, because grid street patterns often consume more land than do alternative designs, increasing the cost of infrastructure for the developers (Canada Housing and Mortgage Corportaion, 1997; Southworth and Ben-Joseph 2003; IBI Group, 2008). With the new patterns came an increase in the distance between people's homes, places of employment,

schools, retail centers, and other attractors. The increase in distance between attractors most certainly, though not definitely, resulted in an increase in the average Vehicle Miles Traveled (VMT)[16], while making walking or riding a bicycle increasingly impractical.

Even the design of the road surface itself was changing to suit motorists. The 2003 works of Southworth and Ben-Joseph (2003) studied changes to the suggested minimum width of residential street pavement from the 1940's to 1960's by organizations such as the Federal Housing Administration, the National Association of Housing Officials, the Community Builders Council, and ULI (p. 161). The creation of auto-centric development patterns that evolved have been shown to discourage purposive physical activity – such as walking for utilitarian purposes – while continuing to promoting automobile dependency (U.S. Department of Transportation, 2015; McDonald & Aalborg, 2009; Munshi, 2016; Pedestrian and Bicycle Information Center, 2005).

Simultaneous with the rise in popularity of the automobile, the transit systems that prompted the shift in development from the cities to the suburbs saw a gradual decline. Though the 1930's experienced heavy usage due to the Great Depression when commuters struggled to afford fuel and the upkeep of cars, every decade beyond saw transit use drop. With declining usage, and the argument that streetcars and other on-road transit modes were a major cause of traffic congestion, communities began to dismantle the lines, which only served to enhance automobile dependency (Frohardt-Lane, 2011; Jones, 1985).

With the framework for an auto-centric infrastructure, current generations are now realizing

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[16] The Vehicle Miles Traveled (VMT) is an indicator of how much and how far people are traveling by motor vehicles on the roadway system. Unfortunately, statistics on VMT began in 1970 (US Department of Transportation, 2016).

the outcomes of past planning missteps. Lawther (2007) reports that "from 1978 to 1998, total vehicle registrations in the United States increased by more than 42 percent and vehicle miles of travel increased by 70 percent" (p. 1118). Chen and Nozick (2016) estimate that traffic congestion costs were a staggering $124 billion in 2013 and are projected to rise to $186 billion by 2030 (p. 124). The Texas Transportation Institute wrote in their 2012 report that commuters in the United States spent an additional 5.5 billion hours and 2.9 billion extra gallons of fuel due to congestion (Schrank, Eisele, & Lomax, 2012). Given the threats to sustainability posed by over-reliance on the automobile, the writing team of Krause, Feiock, and Hawkins (2016) proposed that "research on sustainability needs to shift from the specifics of sustainability practices (what is sustainability?) and motives (why sustainability?) to strategies for implementing change" (p. 115).

Cultivating a culture of fear

The shift in roadway construction that began to scale lane width to cars instead of people is now understood to have the effect of increasing vehicle speeds (Balakrishnan & Sivanandan, 2015; Dhamaniya & Chandra, 2013). As travel lanes widen, free-flow speeds (FFS) of motorists have been found to increase (Balakrishnan & Sivanandan, 2015), which is alarming to vulnerable road users, as is noted in the Pedestrian Level of Service algorithm developed by Landis, Vattikuti, Ottenberg, McLeod, and Guttenplan (2001).

Motorized modes of transportation, aside from motorcycles, have safety features that offer a degree of protection for occupants in the case of a collision; however, vulnerable road users – by definition – are inclusive of all travelers who are exposed to the hazards of the travel environment, regardless of their particular conveyance (Fla. Stat. §316.027(1)(b); McPherson, T., 2016; Texas State Stat. §12-1-35). Unfortunately, speed is unforgiving. Olszewski, Szagała,

Wolan´ski, and Zielin´ska (2015) report that the probability of death increases by 37% for every 10/kilometer per hour (or 6.2 miles per hour) increase in speed (p. 83).

Other hazards that people associate with automobiles are distracted drivers, drunk drivers, and inexperienced drivers (*4 in 5 drivers fear they are over drink limit,* 2008; Applegate, Cullen, Richards, Lanza-Kaduce, & Link, 1999; Chataway, Kaplan, Nielsen, & Prato, 2014; Watters & Beck, 2016). However, while there is an alarming number of pedestrian deaths and injuries reported in the media, the truth is that pedestrians are over-represented in the crash data, accounting for 14 percent of all traffic fatalities but only 10.9 percent of trips (NHTSA, 2015). Though the suggestion that fears harbored by vulnerable road users may be amplified by media reports (giving credence to the power of media over perception), traffic safety has, nevertheless been identified as an important barrier to walking and bicycling (Davison & Lawson, 2006; Saelens & Handy, 2008; C. Yu, 2014).

One example of this can be observed by such indirect measures as decreases in the number of children walking or riding their bicycles to and from school. When the 2013 Kaiser Permanente survey that asked 1,224 adults what prevented them from walking[17] – the top answer was "fear of cars" (Center for Disease Control and Prevention, 2005; Gfk, 2013). The concern that road users have can be passed along to other potential road users as well, such as from parent to child. Yu and Zhu (2016) reported similar findings, specifically that "parental attitudes showed significant mediating effects on walking" (pg. 72), and that "strong safety concerns reduced enjoyment and increased attitudinal barriers, and thus decreased likelihood of walking to/from school" (p. 72). Conversely, the same study found that "positive peer influence, walkable

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[17] This measure was included as 42.1% of respondents to the CDC survey (2005) cited "fear" as the primary reason parents drive their student children to school.

home–to–school distance, and favorable walking environments were associated with more enjoyment and lower attitudinal barriers, and in turn increased likelihood of walking to/from school" (p. 72).

Power in numbers

A core strategy to counter the adverse impacts to vulnerable road users is to bolster their numbers. Pedestrians are safer as they walk in greater numbers, either together (at one time) or as a community (Bhatia & Wier, 2011; Jacobsen, 2015; Wegman, Zhang, & Dijkstra, 2012).

The majority of the metropolitan areas ranked on the aforementioned Dangerous by Design list are located within the "Sunbelt" (i.e. southern regions) of the United States. While Sunbelt cities all tend to have moderate climates in common, which would seem ideal for walking, placement within the rankings show that communities that top the list for the most dangerous pedestrian travel environment all coincidentally rose to prominence during the post-World War II shift in urban design that de-emphasized urban pedestrianism. They tend to have embraced sprawling suburban development, separated land uses, and other unsustainable land use patterns that became popular during the housing boom of post-WWII. Conversely, one finds that Boston is ranked 50th on the list, New York is 48th, Chicago is 44th, and Washington, DC is 35th. The latter cities were established and designed during the 19th century or earlier, are more likely to have smaller blocks, tight street grids, and narrow roads, all of which were originally intended to be used by people on foot or using horse-drawn conveyances (Southworth & Ben-Joseph, 2003).

While it may seem counter-intuitive to bolster urban pedestrianism in order to enhance the safety of walkers (i.e. one might assume that a greater number of pedestrians should

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rationally equate to a greater likelihood of incidents), the fact is that New York City has a fairly

safe walking environment relative to its population and despite its constantly high level of

activity; with many other similarly-situated U.S. cities faring the same (Anderson et al., 2014).

Planners speculate that one possible reason for this phenomenon is the principal of "power in

numbers" (aka "safety in numbers") (Bhatia & Wier, 2011; Jacobsen, 2015; Wegman et al.,

2012). Presumably, motorists who live and drive in cities with high numbers of walkers expect to

see pedestrians because they are so prevalent, and as such, are more prepared for chance

encounters. The Jacobsen study (2015) specifically noted that "motorists adjust their behavior in

the presence of people walking and bicycling" (p. 271).

> The likelihood that a given person walking or bicycling will be struck by a motorist varies inversely with the amount of walking or bicycling. This pattern is consistent across communities of varying size, from specific intersections to cities and countries, and across time periods. (Jacobsen, 2015, p. 271)

According to the methodology of the Dangerous by Design study, the statistic

"Percentage of people commuting by foot" (p.4) is one of the top two leading predictors of rank

on the list. In this case, 6.2% of the population of New York City commutes by foot, followed by

Boston (5.3%), San Francisco (4.3%), Philadelphia (3.7%), and Pittsburgh (3.6%); whereas only

1.1% of the population of the Orlando-Kissimmee MSA walks for utility (Anderson et al., 2014,

p. 5). Based on this, and noting efforts to bolster commuter confidence, a primary objective of

any media campaign pertaining to active transportation should be to encourage, not discourage,

walking and/or cycling; because, according to this logic, greater numbers of pedestrians and

cyclists should theoretically equate to a safer travel environment, all other external (i.e.

infrastructure) factors considered.

Affecting Human Behavior Using Media

As previously discussed, advocacy groups and agencies at all levels and facets of

government have worked for years to make walking safer. A tremendous amount of resources

have been allocated to these efforts; though the Ma, Dill, and Mohr (2014) study found that

traveler perception of the environment may have a greater effect on traveling behavior than the

actual, objective environmental conditions. The same study, however, led researchers to

determine that coupling infrastructure improvements with an intervention would function to

improve people's perception of the travel environment, which could potentially increase the

likelihood those study subjects would travel on public roadways.

Mass media is a powerful and relatively inexpensive agent by which information can be

disseminated, especially as it attempts to affect human behavior. Mastery of the media is the key,

as the messages must have salience in order to be effective.

The manner by which one measures media's impact on people can be differentiated

according to two notions: *media effects* and *media impact*. According to Inagaki (as cited in

Napoli, 2014) the two concepts are distinguished as follows.

> The field of media effects can be characterized as having a strong micro
> orientation, in that the unit of analysis is typically the individual media user, and
> the focus is on the relatively narrow question of whether exposure to a particular
> media message impacted that user's attitudes, beliefs, cognitions, or behaviors.
> When we talk about media impact, on the other hand, the orientation can be
> characterized as a bit more macro, in that the concerns extend beyond whether
> individual media users had their attitudes, beliefs, cognitions, or behaviors
> affected, to also include broader systemic changes at the levels of organizations
> and institutions (p. 8).

Some media is produced with the deliberate intention of targeting an audience in order to

achieve a definite impact on that audience. Public service advertisements, commercial

advertising, and educational programming would certainly fit within this category. Other forms

of media, such as movies, television shows, and Internet productions that are created for

entertainment purposes can be just as impacting, albeit inadvertently. For instance, McCool,

Cameron, and Petrie (2001), in their study of adolescent smoking in New Zealand found that the

study subjects – aged 12 and 13 years old – were "predominantly nonchalant towards the

inclusion of smoking images in film…[which was] linked with the perception that smoking is

normal and prevalent" (McCool, Cameron, & Petrie, 2001, p. 1577). Though the genre of the

media was not necessarily smoking related, the inclusion of characters within the films that

smoked conveyed a meaningful message to the audience about the practice.

There are, of course, merits of using both positive (warm) appeals or negative (guilt)

appeals to achieve the desired results of the producers, however, social marketing researchers

have struggled to empirically compare the effectiveness of the two. Prior research has

nonetheless been able to demonstrate the successes of both approaches, albeit in different

applications. Therefore, this review of the literature examined each approach according to those

areas where the approach has found the greatest success in terms of salience to its audience in

order to relate the findings to this study.

The 2015 study by Burton, Hill, and Bakir sought to better understand the psychological

processes that occur while attempting to convince "light versus heavy engagers" (p. 237) of

supposed bad habits to curb their harmful behavior (Burton, Hill, & Bakir, 2015). Using as their

representative habits – texting while driving (light) and excessive gambling (heavy) – the

researchers found that "advertisements containing positive imagery were more effective at

influencing heavy engagers to limit their harmful behaviors" (p. 237) as those heavy engagers

seemed to resist advertisements containing negative imagery, relating instead to the characters

and/or scenarios of the positively-themed ads. Conversely, those participants who were deemed "light engagers" (p. 237) were found to limit their harmful behaviors after viewing advertisements with negative imagery. The researchers noted that heavy versus light users tend to respond differently to the two stimuli that influence persuasion, therefore they suggested having separate campaigns in the case where two goals were pursued simultaneously. This is an important finding concerning this research, as it was suggested in the opening chapter that current approach to curbing the harmful behavior by motorists (i.e. failure to yield the right-of-way to pedestrians attempting to legally cross the roadway) might have an adverse effect on pedestrian viewers of the same media.

Apollonio and Malone (2009), when studying the effectiveness of the American Legacy Foundation's "Truth" campaign that addressed cigarette smoking, noted the campaign was generally negative in nature. While this approach seems to counter the previous research of Burton, Hill, and Bakir (2015), the researchers of the Apollinio and Malone study clarified that the campaign was not necessarily targeting current cigarette users, but sought to curb smoking initiation (which it did effectively).

Kleisen (2011) studied road safety from the unique vantage point of focusing on the positive aspects of the experience. Noting that much prior research tends to concentrate on the negative aspects of road safety, studying instead "road unsafety" as it pertains to crashes, risks, and other aberrant driving behaviors (p. 705); Kleisen chose to instead to study driving in terms of what the participants of the study feel are safe or normal. "Car karma" (p. 705) was the term that described the optimistic thinking where "young drivers discussed their ideas of safe driving and their reasons for using (or not using) safe driving styles" (p. 705). The researcher argues that

this approach – focusing on safe driving habits instead of harsh outcomes (i.e. crashes) that are relatively rare on an individual level – may be more conducive to drivers.

In 2010, Dempsey and Mitchell wrote an article, published in the Journal of Consumer Research, concerning a concept called *affective conditioning*. The psychology behind this phenomenon is that when one item is juxtaposed in close proximity to other items with which people already feel positively about (e.g. sunny weather, cute babies, puppies, etc.), one's perception of the original item is positively affected. The Dempsey and Mitchell (2010) study involved two different brands of writing pens – one with presumably better properties than the other. The experiment simply showed study subjects both styles of pens, all the while being careful to associate controlled photos with each style. For instance, they associated positive images with the pen deemed of a lesser quality and vice versa. They did so to see the effects of affective conditioning on the subjects. The experiment yielded a 70-80% success rate (i.e. people selected the pen associated with the positive images overwhelmingly, even though the other pen was better.)

Self-identity is another concept that is important to this study. William Klemm (2014) explains self-identity as a phenomena, often used as an advertising strategy, that focuses on people's social identity – how people sense who they are based on their particular set of group membership(s) (Tajfel, 1979). Groups and other social constructs to which people associate (e.g. sports teams, friend base, family, etc.) are an "important source of pride and self-esteem" (McLeod, 2008, NP), especially as they provide people with a sense of belonging. Tajfel purports people naturally organize others into categories (e.g. an "in-group" and an "out-group", or "us" and "them" respectively) (McLeod, 2008, paragraph 8) as a normal cognitive process. In doing so, McLeod suggests the process exaggerates both the differences between the two groups

and the similarities of things within the same group (McLeod, 2008, paragraph 9). So, as people

are presented with media images, they identify with (respond to) those images that are consistent

with their particular social identity. This manifests when people cast themselves in the role of an

actor or celebrity that sponsors a product, or a beautiful model selling make-up or the like. This

may also account for the reason so many people rely on a particular news source: those channels

work to minimize identity threat, thus also minimizing the degree to which they are inconsistent

with a person's social identity (Klemm, 2014). At this point, it is interesting to note that the

aforementioned theories serve to also minimize repetition. While showing an ad over and over

may result in a certain amount of programming, the thought is that a message that appeals to

people in a non-threatening way will be better received with the necessity for less repetition.

<u>Anticipated Contributions of the Study</u>

Renewed interest in city living

The American city is experiencing a renaissance. Ballard and Fuguitt (1985) cited the

U.S. Census Bureau report that metropolitan areas began growing more rapidly than

nonmetropolitan areas starting in 1980 (Ballard & Fuguitt, 1985). By the mid-1990s, young

people aged 25 to 29 were twice as likely to move from the city to the suburbs as they were to

move from the suburbs to the city – though now they are only a quarter more likely to do so

(Gurwitt, 2008; Toppo & Overberg, 2014; Wieckowski, 2010). The trend has been reported to

have continued into the new millennium, as the U.S. Census Bureau announced urban

populations increased by more than 12% from 2000 to 2010, whereas the nation's overall growth

was less than 10% during the same period (U.S. Census Bureau, 2012). While this might be

explained by a multitude of factors, the data nonetheless shows that more people have an interest in urban living. With the many advantages and benefits of both public and human-powered transportation[18], such as improved public health, financial benefits at the individual and aggregate levels, increases in social interaction, and lessened adverse impacts to the environment (Stephens, 2017), state and local government officials have begun to actively support and encourage the establishment of other modes of transportation via policy changes, funding commitments. Therefore, the findings of this study should aid policymakers as they continue to prepare for changes in the urban travel environment.

Strengthen, not undermine current pedestrian media initiatives

This study sought to demonstrate the power and sensitivity of the perception of active travelers, thereby aiding existing initiatives that promote active travel in a positive manner. The expectation is it will serve as a reference for planning practitioners and academics in all fields of understanding. Ultimately, the intention is to enhance, not undermine, existing media campaigns and safety initiatives by demonstrating how a two-fold approach to educating travelers of difference modes – as was previously suggested by Burton, Hill, and Bakir (2015) – might be a more effect way of protecting vulnerable road users, while encouraging walking and bicycling.

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[18] "Human-powered" transportation pertains to walking or riding a bicycle. Another term for the same is "active transportation". The terms were derived from the fact that people who travel via bicycles or walking are actually powering their own conveyance. Hence they – as humans – actively engage in powering their transportation.

CHAPTER 3: METHODS

<u>Overview</u>

As was documented in the Introduction chapter, this research was undertaken to examine

how positively-themed media content, being qualified by the inclusion or omission of certain

thematic elements, impacts pedestrian and potential-pedestrian perceived self-efficacy. As was

also noted in the Introduction chapter – specifically in the Limitations and Delimitations sub-

section – because a general awareness of the region's reputation as being a "dangerous" place to

travel by foot exists, the researcher assumed from the start of the study that participants would

likely have pre-conceived opinions about walking. These assumptions were subsequently

validated during the interview process as 100% of the participants acknowledged they harbored

fears relating to walking, primarily due to such reports (valid or not).

Prior to beginning the research, approval was received by UCF's Institutional Review

Board. The study was then initiated with a thorough review of the literature to discover and

document the origins of any fears harbored by pedestrians or even potential pedestrians,

especially as it relates to how Western transportation systems evolved over the last two centuries.

Other aspects of the literature review pertained to the discovery of media strategies and effects.

The following chapter starts with an outline of methodologies that were previously used

for community selection, for the selection of the appropriate media to be shown, for participant

recruitment and selection, and for participant interviews, including their assignment into one of

two sub-groups beyond their individual interviews. The researcher then weighed the advantages

of both the quantitative and qualitative approaches as they pertained to the specifics of this study,

with previously utilized methods for data analysis all being considered. At this point, however, it must be noted the researcher developed a novel strategy – based loosely on methods employed by the Harmony Institute (2011 and 2013) – that was ultimately utilized specifically for this study, thus enhancing the study's contribution to the body of knowledge. Details regarding the same are found in the following sub-chapters.

<u>Community Selection</u>

The study setting is Central Florida. Being that the previous chapters identified the Orlando-Kissimmee-Sanford MSA as one of the most dangerous place for pedestrians in the United States (Anderson et al., 2014; Anderson et al., 2016) the search for a suitable study community began by examining and comparing the various types of jurisdictions found within the four counties of the MSA: Lake, Orange, Osceola, and Seminole. It must be noted that governmental entities were used during the selection process only as a way to narrow the search for a community from which individual participants would be recruited, as they (or, more specifically, the perceptions of individuals) serve as the level of analysis for this study.

The first step in the process was to identify a community within the MSA that closely mirrored the entirety of the MSA. Once such a community was identified, select persons would be chosen and interviewed in a semi-structured interview process that was designed as a client-centered responsive evaluation (Richards, 2009; Stufflebeam, 2001) in order to include as many types of travelers and denizens as possible.

As the process began, a number of criteria were established as being important and appropriate qualities, requisite for inclusion in the study. Population numbers and density of the

participants' community, the number of pedestrian collisions, median household income, and racial and cultural diversity were considered some of the primary criteria to be used in the community-level selection process (Anderson et al., 2014; Anderson et al., 2016).

A comparison at the county level via the U.S. Census Bureau's American Fact Finder (2015) revealed large differences between the four counties in terms of the aforementioned criteria. A comparison at the city level yielded similar findings, albeit both within and without the county boundaries; however, a comparison on the scale of the "census designated place" was found to be more manageable in terms of size of the community, especially as the focus of this dissertation is unincorporated areas. It should be noted that Census Designated Places (CDPs) are the statistical counterparts of incorporated places, and are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located (U.S. Census Bureau, ND). Within the four-county MSA one finds 47 census designated places: 14 in Lake County, 19 in Orange County, 6 in Osceola County, and 8 in Seminole County. Of the 47 CDP's, one community – the Conway CDP – was selected as the starting point, primarily because it closely matched the region's mean scores on population and population density, racial and cultural diversity, pedestrian collisions, and median household income. Please see Appendix H, Evaluation of Central Florida Census Designated Places and Appendix I, Select Community Case Studies for more specifics on this process.

<u>Mass Media Selection</u>

Next, being that this study sought to discover the effects of positively-themed mass media on the perceptions of pedestrian and/or potential pedestrian travelers, the selection of the particular media segment to be used was equally as important as the participant selection process. The following guided the researcher in this endeavor.

First, the researcher sought to identify a short media segment of approximately 1-2 minutes in length. The rationale behind this target length of media was that the findings of this study might hopefully be replicated in time, so the clip used during the research should closely resemble what might eventually be used by practitioners. Pedersen (2015), in her study of various media audiences and platforms, found that marketers have a mere 30 seconds to capture the attention of viewers before the viewer moves on, whereas viewers seeking instruction or entertainment are typically more patient. Nonetheless, brevity is an important aspect of media messages and so being guided by the Visible Measures (Russel, M., 2014) findings that nearly 60% of viewers will quit watching a video after the two-minute mark, the researcher sought to limit his findings to videos of two-minutes or less.

Any video to be used in this study should also serve to produce a calming effect on the viewer through the inclusion of elements that are non-threatening, pleasant, hedonic, and placating (i.e. positively-themed); while being careful same segment did not contain any negative thematic elements.[19] The researcher posits that the findings of Hoeckner, Wyatt, Decety, and Nusbaum (2011) showed, for example, how the choice of music selected and used in media can

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[19] A table (Table 10) of positive and negative thematic elements used as criteria for this selection can be found in Appendix C.

"have an aesthetic effect on the perception and understanding of [the] screen content" (p. 146) of movies, "can influence character likability and the certainty of knowing the character's thoughts, which are antecedents of empathetic concern and emphatic accuracy" (p. 146). Klimstra *et al* (2011) found some evidence of how weather affects people's moods, though the extent to which it does so and the exact effect resultant of that study was inconclusive. Nonetheless, San Francisco clinical psychologist Tecsia Evans, PhD, disagreed with the aforementioned inconclusive results, as was quoted in the Taylor (2018) article, *Can Rainy Days Really Get You Down?*, "When it gets dark and dreary out, some people definitely have more susceptibility to feeling lonely or down. It's pretty common to see a change in mood -- such as feeling sadness or lower self-esteem -- when it's rainy outside." (para. 3). Another researcher, Denissen et al. (2008), was split, finding that the weather has a greater impact on a person's negative mood than one's positive mood.

Taubman-Ben-Ari *et al* (1999) – in Guttman (2015) – emphasized how "images of death as a means to increase particular audience members' motivation to avoid a traffic risk could actually do the opposite" (Guttman, 2015, p. 154). So, for this reason, the backdrop and other background elements of media used in this study would ideally represent an atmosphere and/or an appropriate level of activity to which the viewer could relate. Note, however, the clip's specifics would not necessarily serve to replicate the viewers' own community (i.e. the video images would not need to be filmed in a particular location that is familiar to the viewer): Having actors simply modeling safe travel behavior in a positive setting should suffice, as is hypothesized by this study. To substantiate this position, the Social Cognitive Theory on which this study relies as its theoretical framework suggests that people's conceptions of what they deem appropriate is reflected and heavily influenced by their observations of the "behaviors,

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attitudes, and emotional reactions of others, who might serve as positive or negative role 'models'" (Guttman, 2015, p. 154).

The process used to select the appropriate media segment involved developing a coded sheet of categories (themes) that reflect what the researcher was targeting as an outcome of the media (i.e. positive themes). Modeling the coding sheet after Atkin's research of effective public service announcement strategies (Atkins, C.K. and Chaffee, S.H., 1972), the categories used were messages of awareness, instruction, persuasion, content, mechanical and stylistic factors; and the messenger(s) who delivered the content. The last category was to be represented by the actors shown in the media.

Though the target population of the study is the pedestrian and/or potential pedestrian traveler, one particular media clip stood out as being the most appropriate use of positively-themed messages relevant to travel: DOE Road Safety Cyclist Safety. As the title of the clip suggests, it was produced to target bicyclists; however, being that bicyclists and pedestrians are both considered "vulnerable road users" by most state statutes in the United States (Fla. Stat. §316.027(1)(b); McPherson, T., 2016; Texas State Stat. §12-1-35) and beyond (Malone, K., 2017); upon further review of the material, it became apparent the central messages of the media concerned the interactions between travelers and not so much the mode of travel each utilized, with the primary message of the clip centered on mutual cooperation between travelers of different modalities. For these reasons, its inclusion in the study seemed appropriate.

With most of the neighborhoods within the Conway CDP being categorized as traditional suburban, the community shown in the selected media was a good fit as the researcher assumed the participants could more easily relate to the pace of life displayed by the actors in the clip.

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Choosing an Approach to the Study

The next choice faced by the researcher was to decide how best to answer the aforementioned research questions, both accurately and efficiently. Qualitative analyses typically requires a smaller sample size than quantitative analyses. Moreover, as Golbuff (2014) paraphrased the Wellington and Szczerbinski (2007) quip, "qualitative interviews are valued for reaching where 'other methods cannot reach'" (p. 50). An attempt to generalize the findings of this study was not the objective of the researcher, as Flyvbjerg (2006) suggested data that cannot be formally generalized should not be discounted, as it "does not mean it cannot enter into the collective process of knowledge accumulation in a given field or in a society" (p. 226).

As a rule, qualitative sample sizes should be large enough to obtain feedback for most or all perceptions, so as obtaining most or all of the perceptions will lead to the attainment of saturation, which occurs when adding more participants to the study does not result in additional perspectives or information. Glaser and Strauss (1967) recommended the concept of saturation for achieving an appropriate sample size in qualitative studies, though other guidelines have also been recommended. For instance, regarding an ethnography, Morse (1994) suggests approximately 30 - 50 participants. For grounded theory, Morse (1994) has suggested 30 - 50 interviews, while Creswell (2013) suggests only 20 - 30. And, for phenomenological studies, Creswell (2013) recommends 5 to 25, while Morse (1994) suggests at least 6. In the end, however, it was determined there are no specific rules when determining an appropriate sample size in qualitative research. Or, as Patton (1990) surmised, the qualitative sample size may best be determined by the time allotted, resources available, and study objectives. For this reason, the researcher chose to establish and cap the initial pool of study subjects at sixteen participants. The

rationale was that sixteen participants would allow for sufficient variation of perspective across a diverse pool of interests and backgrounds. Moreover, the number would allow for the creation of two sub-groups of sufficient size to provide adequately rich discussions, while also remaining relatively manageable, with eight participants being assigned to each sub-group. Should saturation be not be achieved with the first pool, the process would simply be repeated.

The logic behind querying participants both as individuals and as members of small groups can be found in the previous studies of Tajfel (1979), McLeod (2008), Klemm (2014), and the Harmony Institute (2011 & 2013). Interviewing individuals affords the researcher with the opportunity to discover the unadulterated and mostly unaffected responses of the person; while sorting those same individuals into small groups that share a common attribute – which in this case was their proclivity to walk or not to walk within their community – was a part of the normal cognitive process (Tajfel, 1979). Tajfel found that such grouping could be an "important source of pride and self-esteem", which McLeod (2008) suggested could exaggerate the similarities of things within the same group (paragraph 9). Though, admittedly, the group assignments were not organic and self-assigned, but instead were artificially created by the researcher, the thought was the conversations that emerged from the small group sessions, as directed by the semi-structured questions posited by the researcher would nonetheless reveal even greater insight into the perceptions of the participants, as they might be emboldened by their quasi-likeminded group mates.

Armed with this information, the researcher opted to utilize the qualitative approach, especially because of the richness promised by the findings.

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Participant Recruitment and Selection

The researcher began the recruitment process by adopting methods utilized previously by researchers (Arcury and Quandt, 1999; Bachman *et al*., 2017; Glaser, B.G. and Strauss, A.L., 1967; Lofland, J. and Lofland, J., 1984; Namageyo-Funa et al., 2014; Robinson, 2014). As was suggested in the Community Selection sub-section above, that step served to determine and define the area of the MSA from which the study participants would be recruited. Beyond that, it was established that specific participants would need to reflect the purpose or goals of the study, hence the objective of the researcher was to select denizens based on a purposive sampling method (Arcury and Quandt, 1999; Fraenkel & Wallen, 2009). Some primary concerns and/or potential challenges of the researcher were that the method of selection would need to bolster the likelihood the study subjects would be familiar with traversing the Conway CDP and be somewhat representative of the CDP's overall demographic character, all while controlling for bias to the greatest extent. In order to avoid some of the problems encountered by other qualitative researchers, such as those attempting to target low-income and/or underserved minority populations (Jones, Steeves, and Williams, 2009; Joseph, Kaplan, and Pasick, 2007, Renert, Russel-Mayhew, and Arthur, 2013), or while broadcasting to those same populations using more traditional media (e.g. flyers and letters) (Edie and Allen, 2005; Jones et al., 2009), the researcher heeded the suggestions of Felsen et al. (2010) and Spratling (2012) by relying on face-to-face recruitment with participants (as found in Namageyo-Funa et al., 2014).

The researcher began by determining the characteristics that were relevant to sampling for this study. Specifically, the criteria would need to reflect both the goals of the research (i.e. the affect(s) of positively-themed media on travelers) and describe the population to be studied

(i.e. those who would be familiar with traveling in and around the Conway CDP). The characteristics established by the researcher (resultant of the search of existing literature) can be found in *Table 10: Categories of thematic elements used in media, as they pertain to transportation* and in *Appendix H: Evaluation of Central Florida CDPs: Evaluation Criteria.*

The researcher personally extended invitations to purposively identified participants with the intention of helping to address the impersonal stigma sometimes associated with other types of research (e.g. online and/or direct mail surveying, etc.). Though the participants were all associates of the researcher to some degree (either directly or indirectly), many were merely known to the researcher through the relationship with a common friend or relative, and thus were not directly known by the researcher prior to the onset of the study. It should be observed that, aside from the face-to-face recruitment strategy, Jones et al. (2009) offered using word of mouth as a successful strategy, while Eide et al. (2005) and Felsen et al. (2010) both touted the merits of "building trust with participants" as their method of successful recruitment (Namageyo-Funa et al., 2014, p. 2).

An advantage of having the ability to exercise greater control over the respondents to be interviewed was that this approach allowed for the inclusion of people classified as homeless and/or transient; as compared to the blanket approach used by quantitative methods that rely heavily on a residency requirement, used to limit study subjects to the target population area.

The resulting purposive sample of participants included longtime residents and new arrivals, and was a balanced pool of participants according to age, race, gender, and level of income, as compared to the aggregate numbers of the CDP. Despite the relatively small sample size, this sampling method was anticipated to produce results that reflected travelers from the Central Florida area (Frankel & Wallen, 2009). The table below shows the demographic

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characteristics of all sixteen of the study participants selected. Because of the confidential nature

of the study, the participants' identities were concealed through the use of a special coding meant

to mask their names. The identifiers of the ID category represent the participants.

Table 1: Select Demographic Characteristics of Participants

ID	Vocation	Race	Gender	Education	Annual Income	Time in area	Residency
A	Clerk	W	F	BA	>$50K	10+ yrs	House
B	Meat manager	W	M	HS	>$50K	5-9 yrs	House
C	Homemaker	W	F	HS	<$50K	10+ yrs	House
D	Laborer	W	M	HS	<$50K	10+ yrs	Homeless
E	Consultant	W	M	MA	>$50K	10+ yrs	House
F	Counselor	W	F	MA	>$50K	10+ yrs	House
G	Paralegal	W	F	HS	<$50K	10+ yrs	Apartment
H	Construction	W	M	<HS	<$50K	10+ yrs	Apartment
I	Bank manager	B	F	AA	>$50K	10+ yrs	House
J	Real estate	M	M	BA	>$50K	10+ yrs	Apartment
K	Corrections officer	W	M	HS	>$50K	<1 yr	Apartment
L	IT programmer	W	M	AA	<$50K	1-4 yrs	Apartment
M	Nonprofit manager	A	F	BA	<$50K	5-9 yrs	House
N	Retired, military	B	M	HS	<$50K	10+ yrs	Apartment
O	Retired, teacher	B	F	BA	>$50K	10+ yrs	Apartment
P	Bank manager	M	M	MA	>$50K	5-9 yrs	House

Table 2: Answers to Select Transportation-related Questions

ID	Daily commute	Main conveyance?	Auto access?	Walk in Conway?	Who should have the right of way?
A	Tri-county area	Drive/ride car	Yes	Often	Autos
B	Tri-county area	Drive/ride car	Yes	Rarely	Autos
C	Within CDP	Drive/ride car	Yes	Rarely	Pedestrians
D	Beyond tri-county area	Ride the bus	No	Often	Pedestrians
E	Tri-county area	Drive/ride car	Yes	Often	Pedestrians
F	Beyond tri-county area	Drive/ride car	Yes	Occasionally	Pedestrians
G	Tri-county area	Drive/ride car	Yes	Never	Pedestrians
H	Beyond tri-county area	Drive/ride car	Yes	Often	Autos
I	Within CDP	Drive/ride car	Yes	Rarely	Autos
J	Within CDP	Bus	No	Often	Pedestrians
K	Tri-county area	Drive/ride car	Yes	Occasionally	Pedestrians
L	Beyond tri-county area	Drive/ride car	Yes	Never	Pedestrians
M	Within CDP	Ride the bus	Sometimes	Never	Pedestrians
N	Don't commute	Combination	No	Often	Pedestrians
O	Don't commute	Combination	Sometimes	Often	Pedestrians
P	Tri-county area	Combination	Yes	Often	Pedestrians

Procedures

The recommendations and rationalization of Albert Bandura (2006) offered the following guidance to the researcher as he decided to design and implement a novel procedure. The exact process of the study is prefaced with the following excerpt.

> There is no all-purpose measure of perceived self-efficacy. The "one measure fits all" approach usually has limited explanatory and predictive value because most of the items in an all-purpose test may have little or no relevance to the domain of functioning. Moreover, in an effort to serve all purposes, items in such a measure are usually cast in general terms divorced from the situational demands and circumstances. This leaves much ambiguity about exactly what is being measured or the level of task and situational demands that must be managed. Scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest.
>
> Bandura, 2006, pp. 307-308

Methods of measuring research question results

Several questions needed to be answered prior to determining the success of this study. The key question asked how one measures the results of the two research questions. With regards to the first research question, what constitutes "enhanced commuter self-efficacy"? How does one "model civil travel behavior"? What are "positively-themed media images"? The second research question goes on to beg the question, "what is a proxy for an intervention?"

As was noted, the researcher needed to establish these answers prior to designing the methodology to answer the research questions. The Introduction chapter of the study began this process by defining a central theme of the study – self-efficacy – as the ability to succeed at accomplishing a task. However, when one adds "perception" to the concept of self-efficacy, it then becomes a self-generated internal assessment of whether or not one can produce given

levels of attainment, despite varying degrees of difficulty. Plainly stated, it is the strength of belief in one's ability to complete a task and/or achieve a goal (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Dahlstrom, Dudo, & Brossard, 2012; Gist, 1987; Jago, Sebire, Edwards, & Thompson, 2013).

The "perception" of one's abilities is the crux of the argument: To what degree do people believe in their abilities. Furthermore, what affects their perception? A contention of this research is that media plays a part in forming and/or swaying people's perception – perhaps for good or for bad. In the case of pedestrian travelers, it pertains specifically to the belief in a traveler's agentive abilities to navigate the surrounding environment, which includes factors such as the stamina to walk a particular distance or being able to overcome perceived hazards or a strenuous travel environment. It combines an affirmation of capability with the strength of that belief (Bandura, 1997). In layman's terms, can one accomplish the task?

As the Literature Review chapter explained, people's confidence in the travel environment has become tainted over the past two centuries, much of it the result of the rise in popularity of the automobile and the manner by which roadways and communities have become increasingly scaled to cars instead of the human traveler. Nonetheless, it was also discovered that many jurisdictions have realized these past failures and are taking steps to rectify the problems in their communities by making improvements in the physical infrastructure of active travelers and promoting the same. Unfortunately, the Ma, Dill, and Mohr (2014) found that some travelers are nonetheless leery of walking and/or riding bicycles in their communities, even though the facilities have been improved and have been determined to be safe for travel. The suggested recourse of that study was to bundle an intervention with the new facilities, so active travelers are better educated and are subsequently encouraged to use said facilities…as the perception of

their self-efficacy is enhanced. This is the objective of the researcher – to discover ways to promote and encourage greater urban pedestrianism, which a number of studies have shown enhances safety through the "power in numbers" concept (Bhatia & Wier, 2011; Jacobsen, 2015; Wegman, Zhang, & Dijkstra, 2012).

"Modeling civil travel behavior" and "positively-themed media images" are similar in their meaning. Appendix C offers a table of thematic elements – both positive and negative – that can be found in electronic media messages. As for "modeling civil travel behavior", that simply implies the actors in the media clip are exhibiting those (and similar) elements identified as positive in Table 10.

So, the first challenge was to design a method of gauging the perceptions of travelers and/or potential travelers, especially as to whether or not those perceptions might become "enhanced". The various interviews allowed the researcher to query participants as to their thoughts on traveling within the Conway CDP (i.e. establish those answers as a baseline) and then initiate the query again after repeated showings of a media clip that exhibited all positive elements, but omitted any negative elements (again, as described in Table 10). Noting the media clip used in this study was but one example of a positively-themed media message, the many interviews also served to identify major themes the respondents felt were requisite for inclusion in any media that hopes to positively affect pedestrian travelers.

As for the proxy aspect of research question two, the interviews asked the respondents their thoughts on how well such media messages affect them in various aspects of their lives (e.g. shopping, eating, traveling, and the like). The researcher guided respondents to consider personal examples of when they may have been influenced by one or more advertisements. The participants were then asked to simply consider the effectiveness of the video message of this

study to the other media with which they were already familiar. The specific steps utilized by the researcher in order to conduct the study is detailed below.

Initial contact

Each potential participant was contacted prior to the initial meeting in order to arrange a convenient time and place to conduct the first interview – the Individual Interview. During the initial contact, the researcher offered a brief explanation of the pending study, which included stressing the importance of the subject's part in the process. The researcher then arranged to pay the respondent the set amount of $50 per hour session (limited to one hour) for the individual interview and another $50 per hour (limited to one hour each) for each of the two subsequent focus group sessions. Because participation was in face-to-face, hour-long interview sessions and was followed up with one small focus group session and one combined focus group session, the rate of participation was anticipated to be considerably higher than a quantitative approach might provide. Plainly put, offering participants a financial benefit for their participation, the process would potentially yield better results utilizing smaller numbers of respondents – especially as it compared to the anticipated low response rates of the quantitative approach. Furthermore, given that the media could be controlled to a greater degree in this type setting, the possibility of user error would be minimized, as compared to a quantitative approach where participants would have been expected to operate a video viewer without the assistance of the researcher.

Interview Process

Video taping. To enhance the accuracy of the data collection, each interview was video recorded according to the terms of the Informed Consent. Specifically, the video camera was aimed

directly at the participant being interviewed, with the field of view being adjusted to reveal any body language exhibited by the subject. Aside from the printed Informed Consent document, which required a physical signature prior to participation, all other responses were gathered via voice responses and interpreted body language, being that all sessions were previously authorized to be recorded for accuracy. This step was another crucial enhancement to the study, as the degree of literacy held by the participants was negated because only the researcher was expected to write. No other party was used to assist the researcher during the interviews or the focus group sessions. According to the terms of the Informed Consent document, all video recordings were erased immediately after analysis, though signed copies of the Informed Consent documents and written transcripts of the events have been retained as instructed by UCF's Institutional Review Board.

Individual interviews. Each participant was scheduled for a private interview and was allotted an hour and a half (with the additional half-hour serving merely as a buffer in case the interview went over in time). All the interviews were conducted in a face-to-face fashion (i.e. no conference calls, Skype calls, or the like occurred). As was previously addressed, all individual interviews and focus group sessions were video recorded in order to capture the exact words and phrases spoken by both the participants and the researcher; and to capture any body language gestures or cues.

After the researcher explained the study to the attending participant in detail, the Informed Consent was read and signed by the participant as an acknowledgment of his/her understanding of the terms. Aside from the printed Informed Consent document, which required a physical signature prior to participation, all other responses were gathered via voice responses and interpreted body language, being that all sessions were previously authorized to be recorded

for accuracy. This step was another crucial enhancement to the study, as the degree of literacy held by the participants was negated because only the researcher was expected to write.

To mitigate the subtle encroachment of confirmation bias into the study, the researcher carefully worded all pre-scripted statements and questions, so as to mask his own inclinations from the participants. For instance, while the ultimate objective of this study was to ascertain the thoughts, beliefs, and perceptions of the participants as it pertained to the effects of electronic media imbued with positively-themed elements, the researcher nonetheless intentionally phrased all questions and instructions in a neutral manner, so as not to unintentionally sway the responses of the participants.

In addition to the expected verbal exchange of dialogue between the researcher and the respondent(s), a video was shown at three separate instances during the interview. The rationale as to why the video was shown only a few times is grounded in the studies of Klemm (2014), who noted how the self- and social-identity theories of Tajfel (1979) and McLeod (2008) found the differences and similarities of people belonging to naturally occurring groups were exaggerated, presumably as they were emboldened by their like-minded peers. Moreover, because membership into such social affiliations (i.e. into those sub-groups) may result in minimized threats to their social identities, a message that appeals in a non-threatening way is better received with the necessity for less repetition (Klemm, 2014). So, as it pertains to this study, the thought was that when the video was viewed by the sub-group of individuals grouped because of their inclination to walk, the images portrayed in the video would be consistent with their own experiences, which would be exaggerated by their group assignment, and would thus manifest as such. Conversely, those individuals in the other sub-group would hypothetically experience the video differently.

One step taken by the researcher to ensure continuity between the participants was for him to recite a preamble at the onset of each individual interview. This step was taken to keep the participants focused on the context and purpose of the interview. The text of the interview preamble is as follows.

> *I have asked you to participate in this interview because I believe your experiences of traveling through the Conway area and your perceptions about those experiences will help the public figures who design and/or manage our roadways and who maintain and implement the systems by which we travel to do a better job of keeping us (we travelers) safe. Specifically, I'm most interested in learning how electronic media messages affect your perceptions as a traveler. So, as we proceed through this interview, which includes viewing a public service advertisement that has previously aired for many years, please try your best to answer each question with this purpose in mind. Thank you.*

The researcher then asked a single prescreening question: if the participant ever walked (for any reason (e.g. recreation or utility)) on more than one street within the Conway CDP community. The choice of answers was a) often, b) occasionally, c) rarely, and d) never. The question had no bearing on whether or not respondents were accepted to participate in the study, but instead was used for further sorting into the sub-groups. The logic behind the question was that it held true to the approach of negating residency as a requirement for inclusion in the study, while also identifying residents who simply walked in close proximity to their own house or apartment.

After the prescreening question, the subject was allowed to watch the video for the first time. After the end of the one-minute video, the first set of questions were administered. The questions pertained specifically to the individual and functioned to gather demographical data.

All the interviews were semi-structured, which allowed the participants to speak freely in response to pre-scripted questions of interest to the researcher. One key aspect of this client-centered, responsive evaluation style, which was previously utilized by Stufflebeam (2001) is that it adds flexibility during the data accumulation process. For instance, when new knowledge emerges during the collection process, the evaluator can change methods and/or approaches to adapt to the new knowledge (Stufflebeam, 2001). The method by which questions were administered incorporated many features – convenience, simplicity, and respect for the respondent – included with the intention of enhancing the participation rate.

Immediately after the first round of questions concluded, the video was shown a second time. Then, borrowing an approach from the field of Education, the researcher utilized Stake's (1967) responsive evaluation model to ask questions designed to determine the participants' utilization of the travel environment within the Conway CDP, their level of skill in traversing that environment, and their disposition with regards to the same. After a third viewing of the video, another barrage of questions queried the participant's thoughts about the impact of media, plus the effect the video and other media-related matters had on their perception of the travel environment and on their inclination to walk (should the opportunity ever arise). The script of study questions can be found at the end of this chapter, though it should be reiterated the questionnaire was utilized solely by the researcher as he conducted the interview (i.e. The questionnaire was not distributed to the participants in written form.)

Table 3: Individual Interview questions

Question	Rationale (Why was this asked?)	Contingency questions
In what decade-range is your physical age? (i.e. 20s, 30s, etc.)	Degree of risk associated with age	N/A
What is your gender?	Degree of risk associated with gender	N/A
What term best describes your race?	General demographics	N/A
Are you Hispanic?	General demographics	N/A
What is your personal income bracket (by $10K)?	Compare with automobile availability	N/A
What do you do for a living?	Determine necessity for driving	Do you need to use a car or truck?
What is the highest level of education you have attained?	General demographics	N/A
Do you live in or work around Conway?	General demographics	Use only main roads or small backroads?
Describe your living arrangement.	General demographics	House? Apartment? Alone? Borders?
How often do you watch television? Use the Internet?	Understand exposure to media	Do you ever watch any local news programs? From where do you most often get your news?
Have you ever had or raised any children?	Degrees of risk associated with parenting children	Describe (i.e. small children, grown, etc.)

Question	Rationale (Why was this asked?)	Contingency questions
How often do you see your neighbors?	Gain sense of community, to be compared later in interviews	Is this good or bad? (i.e. Do you like your neighbors?)
List some good and bad qualities about living in Central Florida.	Understand values	Do you like living in Central Florida? Where does "time to travel to work / school / shopping" rank?
Are the bad qualities enough to make you want to move away from Central Florida?	Rank values	What draws you to live here?
Is living or working in the Conway area better than living or working in the general Central Florida area?	Understand if local travel / interaction better than participant's perception of outlying community	N/A

Pace of the interviews. As was mentioned in the previous sub-sections, the researcher concluded the question / answer session several times during the administration of the survey in order to allow the study subject to view the select media video. Specifically, the video was aired for the first time just after the initial explanation of the study, which included the signing of the Informed Consent document. Though the exact time each participant viewed the video differed, the researcher attempted to pause the conversation / exchange during an obvious and logical cadence point (i.e. When the current conversation topic concluded). The intent was to allow the video to be viewed a total of three times, at (approximately) fifteen-minute intervals during the interview.

1.   It allowed the study subject to become more familiar with the themes in the video due to repetition;

2.   It allowed the researcher to focus the interview on different aspects, such as the identification of video's central message, as interpreted by the subject, or how the respondent perceived their surrounding community's travel attitudes and behaviors; and,

3.   It helped the researcher to assign each individual into one of two sub-groups

   a.   Those commuters who were generally unfamiliar with walking, riding a bicycle, or taking public transit, and

   b.   Those who were more likely to be familiar with the same.

Group assignment. The last bullet reveals a crucial aspect of this study. The deciding criteria – of which there were several – in grouping participants into one of two distinct groups was as follows.

1. Answer to the prescreening question the researcher asked during the Individual Interview;

   a. Respondents who answered "a" or "b" to the pre-screening question were sorted into the sub-group of participants who were deemed to be more familiar with pedestrian / bicycling; whereas those who answered "c" or "d" were sorted into the other sub-group.

   b. In the event of an imbalance in the number of participants in the sub-groups, those respondents who answered either "b" or "c" were flexible (i.e. they were eligible to be assigned to the other sub-group, if only to balance the numbers of participants in each group. The thought behind this assignment strategy was those answers ("b" or "c") revealed flexibility, as the answers "occasionally" and "rarely" were not as static as "often" or "never".)

2. Answers to questions that directly queried participants as to their experience with active (i.e. human-powered) transportation;

3. Answers to questions that asked about the legitimacy of pedestrians and/or bicyclists on the roadway, as compared to other modes of transportation;

4. Answers to questions asking about the perceived safety of active commuters;

5. Answers to questions that asked about previous living arrangements (if applicable), such as the perceived degree to which that former community might be considered "friendly" to active commuters; and

6. The observation as to how the study subjects responded to the video.

It should be noted that assignment into one group or the other was not affected by any other demographical characteristic. Moreover, none of the individuals selected for inclusion in the study were pre-determined based on any traits or for exhibiting any pro- or anti-pedestrian characteristics.

Table 4: Answer to prescreening question

ID	Answer to Prescreening Question, "Do you ever walk (for any reason (e.g. recreation or utility)) on more than one street within the Conway CDP community?"	Assigned to Group "A"	Assigned to Group "B"
A	"A" (often)	Yes	
B	"D" (never)		Yes
C	"A" (often)	Yes	
D	"A" (often)	Yes	
E	"A" (often)	Yes	
F	"C" (rarely)		Yes
G	"D" (never)		Yes
H	"A" (often)	Yes	
I	"C" (rarely)		Yes
J	"A" (often)	Yes	
K	C" (rarely)		Yes
L	"D" (never)		Yes
M	"D" (never)		Yes
N	"D" (never)		Yes
O	"A" (often)	Yes	
P	"A" (often)	Yes	

Initial coding. After the administration of all the individual interviews, the researcher engaged in one of the more labor-intensive aspects of qualitative research: data collection and the coding process. According to Creswell (2013), this must follow a systematic process so as to correctly identify important key terms, words, phrases, and in this case, certain pre-determined body language cues, in order to develop specific categories on which to focus for the remainder of the study. This first step involved open coding, whereby primary themes were identified across all participants' responses and gestures. While some participant responses were very specific as to their meaning, others required additional analysis. Take, for instance, the gestures. The researcher coded all crossed arms, facial expressions, posture, and the like, in order to include that information in the coding process. (See Table 5 below, which details the pre-determined body language cues established by the researcher.) It should be noted that while the researcher did not specifically mention non-verbal cues such as body language would be part of the analysis, the Informed Consent document nonetheless explicitly mentioned the interviews would be videotaped. Either way, the UCF IRB was sure to include a schedule by which the researcher would destroy the video tapes in a timely manner once final analysis was complete.

Coding was initiated by the researcher within one day of the individual interviews, while the exchanges were still fresh on the mind of the researcher. And, while the researcher hastened to complete the coding step as soon as possible after each event, he nonetheless was guided by the video recordings in order to properly document each response in exact detail.

Eventually, a number of primary themes became apparent as they bubbled to the top in terms of consistency across the group. For instance, after scrubbing for superfluous articles (such as the words "the", "it", and the like) the term "communication" was clearly a concern across every participant in the study.

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Table 5: Body language gestures and cues

Body language gestures & cues	Positive / Effective	Negative / Ineffective
Cross arms		X
Initiate a frown		X
Initiate a laugh	X	
Initiate a smile	X	
Initiate a yawn		X
Gasp		X
Glance at the researcher	X	
Point	X	
Slouch in chair		X
Suddenly flinch		X
Tap foot/feet/fingers		X

Small focus group sessions. As was mentioned in the previous section, the pool of participants was divided and purposely assigned into one of two groups. Whereas each participant met with the researcher in a one-on-one setting prior, this time each met as a member of one of two groups. Each group was scheduled to meet independent of the other group in separate focus group sessions, where the key topics that emerged, resultant of the Individual Interviews during the initial coding step were discussed. The group participants were deliberately asked to arrive 10-15 minutes prior to the start time, though the rationale for this was not divulged to the participants. The researcher deliberately masked his intention, which was to allow group participants to engage in small talk prior to the formal discussion, thus allowing the participants to get to know one another. Though the make-up of the two groups differed

according to travel behavior, perception, and other factors; the themes guided a common set of questions that was administered to each group.

Similar to the individual interviews, the researcher opened the event with a viewing of the same video. And, again, the session was video recorded, allowing the field of vision being filmed to show the entire group, so as to allow the researcher to document body language during the interview.

This step was necessary to observe how like-minded individuals – as it pertains to transportation issues – interact to support one another or to reinforce any preconceived fears they may harbor. Recalling the theoretical framework on which this study is based, the researcher sought to observe how the three determinants of TRD – personal, environmental, and behavioral – function at this level.

Table 6: Transportation Preferences interview questions

Question	Rationale (i.e. Why am I asking this?)	Contingency questions
Have you ever commuted in any way other than in an automobile?	Determine if participant's travel habits are limited by personal experience	Do you ever walk? If so, do you take the same route?
What are the best & worst parts of your commute?	Identify preferences & stressors	N/A
Describe your parking preferences	Gauge proclivity for walking	Do you ever walk from the back of the parking lot?
How would you rate the travel environment in Conway?	Direct measure of perception of travel environment and gain a better understanding of the participant's perspective	Have you recall a scene where someone was hit by a car? Have you ever heard someone say walking or riding a bike in Orlando is dangerous?

In general, which mode of transportation do you believe should have the right-of-way?
    a) Automobiles
    b) Bicycles
    c) Pedestrians
    d) Public transit
	Gauge level of automobile primacy	N/A

Describe your ideal commute. Why?	Discover travel preferences	Does the thought of being able to walk, ride a bike, or take a bus / train appeal to you?

Question	Rationale (i.e. Why am I asking this?)	Contingency questions
<u>Scenario:</u> You live in an area where walking or riding a bike was a viable option (i.e. The destinations to which you travel are not overly far from home, in terms of time or distance). If you walked or rode a bicycle as a regular form of transportation, do you think that might change your relationship with your neighbors?	Determine participant's perceived impact of walking or riding a bike	N/A
Rank your ideal transportation preferences from the choices shown below (e.g. "a" through "d") a) Drive an automobile to where ever I want to go b) Have all my needs nearby & available so I can easily walk to them c) Be able to ride a bicycle to stores and other places I want to go, even though they are not as nearby as the previous option d) Have a public transportation option that allows me to travel any distance, but one that is readily available when I need to go (i.e. it is frequent and timely)	Determine participant's travel preferences, comparatively	N/A
Rank your ideal transportation preferences BY COST TO THE COMMUNITY (i.e. The most expensive is ranked 1st, the second most expensive 2nd, etc.)	Gauge participant's understanding of the cost of transportation systems	N/A

Joint focus group session. The third and final meeting of the participants was the joint focus group session, where all individual participants were assembled at one time – and in like manner – to discuss the same topics as before, albeit with participants of considerably different perspectives with regards to transportation priorities. As was mentioned in the previous sub-section, the thought was to strengthen the beliefs and perceptions of the individuals by pairing them with other like-minded individuals. In this step, however, those beliefs and perceptions are challenged (albeit gently) in order that all members of both groups learn from the opinions and perspectives of one another.

The researcher conducted the final group session as a discussion of the semi-structured questions pertaining specifically to the themes that emerged from the small focus group sessions.

Table 7: Interview questions pertaining to the video and the general effects of media

Question	Rationale (i.e. Why am I asking this?)	Contingency questions
Did you have a favorite aspect of the video?	See how personal preferences align with video scenario	Why was this your favorite scene / scenario from the video?
Think of approximately ten words that best describe what you observed in the video(s).	Understand focus of participant's attention	Ask questions as the occasions arise.
How did the video(s) make you feel as a pedestrian? As a motorist?	Compare / contrast perceptions by mode of travel	Were these two different feelings?
Do you think it is possible to find a community like the one shown in the video?	Determine if participant's travel perceptions are limited by personal experience.	Could you imagine this taking place in Central Florida? In Conway? On your street?
Do you believe electronic media has the power to influence people?	Self-reported answer to Research Question 1	Good or bad? Can you think of a commercial advertisement that has influenced you? What were the circumstances? How does that compare to this video?
Do you think repetition (i.e. showing a video over and over, or saying something over and over) can influence the way people believe?	Self-reported answer to Research Question 2	Do you think showing more videos like this would help people to act with civility? What type of images or elements would encourage you to walk more?

CHAPTER 4: RESULTS

Overview

The primary research question of this study was, "Might positively-themed media images that model civil travel behavior serve to enhance commuter self-efficacy?" Framed another way, "Will broadcasting media messages that are devoid of any visually or audibly alarming elements, assert enough sway over traveler perception that those travelers become more confident as they decide whether or not to walk?" Specifically, will the ultimate outcome manifest as an increase of a predictor of walking behavior – perceived self-efficacy? This, as was mentioned, was the primary question. (Anable, 2005; Bandura, 1994; Gonzale, 2015; MacEachren, 1980; Mendoza, Cowan, & Liu, 2014; Mfinanga, 2014; Peer, 2014; Powell, Martin, & Chowdhury, 2003)

The origins of the second question can be traced to findings of the Ma, Dill, & Mohr (2014) study that recognized the need for an intervention to be combined with physical infrastructure improvements in order to bolster the use of human-powered transportation modes by vulnerable travel populations. As the sub-section *Power in Numbers* (see Literature Review, p. 30) suggested, pedestrians are safer as they walk in greater numbers, either together (at one time) or as a community (Bhatia & Wier, 2011; Jacobsen, 2015; Wegman, Zhang, & Dijkstra, 2012). In this instance, the researcher felt the use of multi-media simply seemed to be a practical and efficient means whereby travelers might be encouraged to make a more educated and informed choice. Therefore, the second research question addressed electronic media's potential to function as a proxy for an intervention that, when combined with the implementation of actual physical infrastructure improvements, would similarly serve to bolster walking (or any other human-power travel mode) as a viable option. Therefore, the second research question examined

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the power of media in order to determine the effectiveness of implementing carefully packaged

media messages, designed with the explicit purpose of wielding influence over the traveling

public.

       To answer these research questions, all participants were interviewed – both individually

and in small focus groups – so the researcher could detect and gauge changes in their answers,

while identifying themes that emerged from those conversations. This chapter serves as a report

on the findings of those interview sessions, including the introduction of the various themes that

were discovered as part of the process.

Major Themes Identified

       The study interviews yielded a clear list of answers to the aforementioned questions. The

participants expressed the belief their input would be of great value to this study and were eager

to participate, if only to be afforded the opportunity to have a role in the process. While the

prologue to this chapter noted the focus of the study was to answer the two research questions,

the following themes were identified as part of that process and then discussed in detail as to

how they might offer insight into the initiative. Those participants who were versed in walking or

bicycling were keen to recall personal experiences that factored heavily into their decisions on

whether or not they would walk (…or to allow their children to walk). Those other participants

who were not necessarily familiar with walking for utility and/or recreation nonetheless offered a

counter-perspective that enhanced the richness of the findings. Either way, the participants were

equally understanding and accepting of the idea of developing an intervention to help encourage

travelers who grappled with the idea of walking on local roadways, all the while continuing to

effectively deter dangerous driving practices by motorists.

<u>Research Question 1: Might positively-themed media images that model civil travel behavior
serve to enhance commuter self-efficacy?</u>

As was suggested in the Methods chapter, the researcher sought to answer this and
similar questions by studying a pool of test subjects who were purposively chosen due to their
novice understanding of transportation-related matters – albeit from a user perspective –
concerning the Conway CDP. After repeatedly showing study subjects a one-minute video that
incorporated many features that were pre-determined to have a calming effect on viewers (e.g.
soothing music, kind gestures used in the video by handsome actors, soft voices, rational
dialogue, etc.) and then interviewing those same viewers immediately after each showing, the
responses of the study subjects indicated participant perception was, in fact, positively affected
after watching the video. Specifically, when comparing the baseline answers that were provided
by the study subjects during the first two individual interviews against their responses of the
subsequent interviews (i.e. the last individual interview and the discussion sessions held in
conjunction with the two focus groups), a clearly positive impact was detected. For instance,
80% of the participants were more amenable to the thought of commuting via active modes of
transportation, even in the instance the change, in reality, might be impractical in their immediate
circumstances. All (100%) of the participants used the terms "safe" and "equal" in their response
to the question, "How did the video(s) make you feel as a pedestrian?" So, in this regard, the
perceived self-efficacy of the study subjects seems to have been enhanced by the treatment.
However, when asked the question that if under the same circumstances as shown in the video
they would travel in that manner, 100% responded that they would, which addresses self-efficacy
as opposed to perceived self-efficacy (i.e. Not only would they feel comfortable in the situation,

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but they pledged they would actually engage in the activity.) When asked, "Could you see this taking place in Central Florida? In Conway? On your street?" the responses were mixed. The respondents were less certain such a scenario would ever manifest in the region (25% answering "yes") or in Conway (38% answering "yes"), though more than half of the participants imagined that travel culture could possibly exist in their own communities (63% answering "yes").

During the process, four major themes emerged as they were assembled from comments the participants made in respect to the first research question. The four themes were representative of constructs formed from a multitude of sub-topics that shared common aspects. The topics that evoked the most discussion were the general themes of communication, safety, cost, and happiness. Know, of course, there were many facets branching from each major theme, each of which will be included in the discussions of the sub-sections below. Table 8 contains a summary list of key words and phrases the participants used during the interviews. That table is located immediately after the discussion sub-sections, though the narratives that summarize the interviews with each individual that also combine to constitute the focus groups are in Appendix K.

<div align="center">Communication</div>

One of the key themes to emerge from the many conversations was the topic of communication. Every participant was quick to observe that nearly all the actors in the select video (the video shown during the interviews) made eye contact with the other travelers, whenever possible. What's more, the participants all agreed – albeit separately from one another – that communication between travelers could easily be assumed to be the central idea behind the production of the video. For instance, over 81% of the participants specifically mentioned the

<div align="center">75</div>

instance (42 seconds into the video) when the young female bicyclist, who was attempting to cross the street, made direct eye contact with the motorist, who in turn reciprocated. When pressed for further details, it became apparent to the participants the dialogue between the actors was all internal: No actor ever actually spoke to another actor – the voices were internal dialogue of what the actors may have thought when confronted with a traffic situation.

Another significant observation by the participants was the calm manner by which the travelers dealt with their individual scenarios. Participant "B" pointed out there was no instance of road rage, or even any small hint of the same.

Three of the participants, who disclosed early in the process that they were not necessarily pedestrians because they rarely traversed their local communities and always drove or rode in cars, questioned the likelihood such scenarios as shown in the video could ever occur in Central Florida. It is interesting to note, however, they were the same three who thought automobiles should have the legitimate right-of-way during a traffic conflict and mentioned Interstate-Four during the Transportation Preferences portion of their respective individual interviews. These sentiments continued during the subsequent focus group sessions.

Other themes mentioned during the interviews mirror current news stories. For example, 10 of the 16 talked about distracted driving, which the researcher included under this heading as the term "distracted driving" seems to imply a lack of eye contact, or more specifically the travelers eyes and/or attention are elsewhere; hence, a break in communication. "Cellphone use" was another popular topic to talk about, though 80% admitted to have engaged in talking on the phone while driving. Only 56% admitted to have sent or read a text message, though the topic was quickly dropped during the three focus group sessions. "Road rage", too, was bundled into this category, though only because of the context by which the topic was discussed. In every

instance, when the term arose, the participant who raised the issue was quick to include the possibility that one or both of the irate travelers may have misunderstood the intentions of the other. For this reason, the topic seemed more appropriate as a communication issue – not a safety issue, which some could easily assume to be the logical classification for the topic.

Another communication-related theme that evoked considerable discussion was travelers who deliberately "ignored" other travelers with whom they shared the roadway. The prevailing assumption was ignoring other travelers was likened to bullying, where the intent was an attempt to justify or excuse being able to act in some selfish or discourteous manner (i.e. "I didn't see the other traveler, therefore please excuse my actions as they were not intentional"). Again, because ignoring someone often involves a deliberate lack of eye contact, this, too, was included under the communication banner.

As was mentioned at the onset of this sub-section, the participants' comments here were in strict contrast to what they said to have witnessed while watching the video. At the end of each viewing, most participants left off with a mention of the positive qualities of the video instead of the negative instances to which they could relate in their own personal circumstances. For instance, words like "friendly", "inviting", "understanding", "cooperation", and "non-verbal cues" were heard at more than twice the rate of any other terms with a generally negative connotation, such as "traffic jam" (21-second mark), "rain" (30-second mark), "blind spot" (34-second mark), or "road construction" (46-second mark).

Safety

It was quickly discovered and acknowledged the topic of safety encompasses a great many facets of travel. For instance, most participants – pedestrians or not – could relate to how active travelers can be quite vulnerable due to a lack of any structural protection, such as physical framework offered by an automobile or bus. However, every participant (100%) voiced concern about how pedestrians might easily be in jeopardy for harm by other travelers due to a collision. The only difference between the two preceding statements is that two participants voiced objections to the first statement, arguing that attentiveness on part of the commuters was the key to avoiding such an event. As the researcher coded the recorded dialogue, he categorized discussion of this nature under the sub-theme "injury due to collision".

Offering a counter perspective, Participant E pointed out the encapsulated design of motorized vehicles, while arguably offering protection in the event of a collision, also serves to impede the view of travelers specifically because of barrier of steel, glass, and other materials that separate the occupant from other external features – including other travelers – found on the roadway. His comment was well received by the focus group in which he participated, though the group nonetheless held to the notion that riding in a motorized vehicle still offered greater protection during a collision, regardless of the tradeoff for greater connectivity with the surrounding travel environment.

Because the video used actors on bicycles, in lieu of using pedestrian scenarios, the collision safety aspect of travel was discussed to be decidedly different between the modes. The participants unanimously agreed (across both groups) they felt walking was safer than bicycle travel, as they reasoned pedestrians most often use separate facilities (i.e. sidewalks), whereas bicycles have all the legal rights to use the roadway, thus theoretically putting bicyclists at

greater perceived risk. Nonetheless, as the video images were noted by the participants to have reinforced, none of the actors seemed to have been at risk at any time.

A risk of harm by collision was not the only safety concern of the participants. Deliberate criminal intent also factored highly in the discussions. While the video – which was produced in Northern Ireland – portrayed a rather passive cultural setting, some of the participants voiced concern about crime in Central Florida. After asking some probing questions to have those particular respondents expound on their answers, 3 of the 5 participants withdrew their concerns upon talking through some scenarios. One of the key epiphanies (which they developed through their own reflection) was that the area itself – the Conway CDP – is not necessarily prone to personal attacks on pedestrians. It was further considered that travelers riding in vehicles could potentially be of even greater risk when compared to active commuters traveling without a mechanized conveyance, as travelers in vehicles possess something of value (i.e. the vehicle itself), whereas the pedestrian – especially those who are walking merely for recreation – often "have nothing to steal".

Again, as it pertains to the research question, the video shown to the participants did not exhibit any collisions, near collisions, or any criminal intent. The positively-themed message received was observed (in a careful review of the video recordings – by the researcher – of the various interview sessions) not to have resulted in impressions of violence or harm, as was eventually discussed by the participants. The researcher noted the keywords used immediately after the viewing were all positive to some degree – addressing the other aspects of the video such as the pleasant weather, the actors' foreign accents, the soothing music, and the other major themes as discussed in this section. It was only well into the group discussions (i.e. several

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minutes) the conversations turned to such other mental images as harm and then crime; and, these topics were found to have been resultant of a single comment.

Cost

A surprising topic to be included on the list pertained to costs – both to the individual and to the community. During both the small focus groups, the general topic of cost was broached. The context of both discussions pertained to the last shot in the video, which showed the roadway construction, and the subsequent necessity for the bike and the automobile to share the same roadway. In the focus group containing those participants who are more familiar with walking, the conversation turned to how the bicyclist was responsible for considerably less wear and tear on the roadway (due to the light weight of the bike). Then, the conversation turned to how the need for more travel lanes might be mitigated (a term employed by the researcher, not the participants) were more people to embrace that particular mode of transportation. By the time everyone had the opportunity to deliberate that aspect of the discussion, terms and phrases such as "thrift", "billions of dollars", "never enough", "always under construction", "car payment", and "price of fuel" were introduced.

The other group – those who were more familiar with motorized travel – offered a decidedly different perspective on the same topic. It should be noted that these two conversations were occurring independent of one another, during the two separate small focus group sessions.

The latter group broached the same topic at the same shot in the video, though they introduced more themes pertinent to the community as a whole. For instance, both "SunRail" and "Lynx" entered the conversation, as did terms and phrases like "waste of money", "boondoggle", "lack of ridership", and "no weekend service". One participant, however, (Participant "D")

offered the counter-perspective that local community roadways are considerably more expensive than all the other modes of transportation combined, to which the group agreed to disagree.

When the two groups convened for the final focus group session, the researcher introduced the subject of cost at the exact same point in the video. Because the researcher was aware both sub-groups began their respective conversations at the same point in the video, the researcher initiated the conversation, as was a planned and deliberate step in the methodology. This time, however, the conversation was much more civil, as the mass-transit dissenters simply acknowledged the merits of including active transportation facilities (especially, after it was pointed out that drivers would benefit from others taking an alternate form of transportation, because it would theoretically result in less automobiles on the roadway).

It is interesting to note that any conflict that might have seemingly attempted to arise during the discussion was quickly extinguished upon the next viewing of the video. Small mentions pertaining to the costs to the individuals and the costs to the community were made, though the discussion of these topics was much more limited.

<div align="center">Happiness</div>

One of the stronger observations from the interviews and focus group sessions pertained to topics related to happiness. Given Central Florida's current infrastructure improvements on the local Interstate, every participant was quick to mention extreme displeasure with traffic jams. This topic arose during 100% of the Individual Interviews – typically as one of the first items discussed upon the conclusion of the initial video viewing. Not only did every participant make mention of local traffic headaches, but they did so in contrast to how uncongested traffic appeared to be on the video.

While the researcher expected the light traffic of the video to be an easy observation –
even by the casual observer – the following sub-topics were also quick to emerge, starting with
the amount of "time" spent in traffic. As the one-minute video demonstrates, the easier one can
traverse an area, the more time left to do with as one pleases. Participants appeared to envy the
actors' seemingly "stress-free" lifestyle, as they used words like "mosey", "stroll", "slow", and
"eke" to describe what they were watching. In nearly every instance (14 of 16), viewers smiled
(as observed during the video playback) when the face of at least one of the active travelers first
appeared. As a contingency question to this observation, when the researcher pressed participants
during the small focus group sessions as to what caused them to smile, the most frequent answer
was the thought of being able to live such a lifestyle, too. And, following up that line of
questioning, when the researcher asked if they thought the lifestyle was overly care-free, many of
the participants relayed they did not think so – only that it was of a slower pace than their own
life situation. Many of the responses addressed the time element specifically and then proceeded
to list many of those features in their respective lives that utilized the greatest amount of time (of
which, travel ranked highly).

Besides the fact time was found to be a key element of happiness, as it pertained to the
study groups, "civility", too, ranked high in their responses. Most of the respondents used one
word in particular to describe at least one aspect of the video – the word "nice". Whether the
participant was referring to other travelers, the weather, the music, or the general mood of the
video, most summed up the experience as "nice", or some variation of the same.

"Quality of life" was a general phrase that was used by several participants, during more
than one conversation. The phrase was understood to encompass a broad method used to gauge
their sense of well-being on many fronts. Those participants with "children" all seemed to

include them in the equation, though "employment", "financial status", "health", and "community" were also mentioned.

Again, this was one of the other key take-a-ways from watching the video. When the researcher was coding the transcripts and re-watching the video recordings of the various sessions, it was noted that conversations that addressed topics pertaining – directly or indirectly – to one of the aforementioned sub-topics of happiness constituted about 25% of the total time the sessions were filmed.

Key Phrases Pertaining to Question 1

Table 8 below presents a list of key phrases utilized by the participants during the individual and focus group sessions. While the list of specific quotes is not wholly comprehensive, the column of over-arching themes on the right-hand side of the table is, in that the researcher reached a point when the same topics were being expressed, albeit using different terminology. So, when the researcher was coding the data, similar topics were combined into over-arching themes for clarity.

Table 8: Key phrases, as grouped by the researcher to address Research Question 1

Key phrases used by participants	Over-arching themes
Communication is a key	Communication
All the bike riders were paying attention to the drivers	
Everyone was watching out for everyone else	
I liked that they made eye contact with each other	
The whole community seemed especially happy and friendly	
No one was talking, but I could hear and see what they were thinking	
Everyone was calm - no road rage	
No one was on a cellphone	
All the actors were looking out, not ignoring anybody	
When they worked together, they seemed to understand what the other person was going to do	
There was a spirit of cooperation	
The drivers were all careful and courteous	Safety
No one was hurt	
I never saw anyone 'almost' get hit	
My biggest concern is my kids will run out into the street	
Everyone was doing what they were supposed to do	
No one was on a cellphone	
My kids walk to school just up the street	
No one seemed distracted - everyone was paying attention	
If I lived there, I'd have no problem walking or riding a bike	
Our roads are always under construction	Cost
I noticed all the riders are a different age - it would be a whole lot cheaper to let my kid ride to school	
The cyclists have less of an impact on the road, so they last longer	
The bikes don't pollute	
Every one of the cyclists looked healthy - I'll bet their healthcare costs are less, too	

Key phrases used by participants	Over-arching themes
They all seem to live or work close by, so they probably spend less time traveling	Happiness
I hate sitting in traffic (jams)	
Not a single real traffic jam on the video	
My kids are asleep sometimes when I get home from work	
I see so much more in my neighborhood when I walk	
I noticed so much detail about their community because the video was produced from the perspective of a walker or bike rider	
I liked the slow lifestyle the video portrayed	

<u>Research Question 2: Might broadcast media function as a proxy for an intervention?</u>

Formatting the second research question in the same manner as the first, the researcher found that most of the topics revealed during the interviews were easily combined into a single topic heading: education. For instance, some of the sub-themes the researcher combined involved terms such as "training", "awareness", "cost", and even "propaganda".

Most of the participants understood the purpose of the exercise from the start – to function as a vehicle to help alleviate fear by teaching people about commuting. Some participants, however, seemed to be skeptical of the phrasing of the research question, fearing it sounded like propaganda, which they perceived as being deceitful as to its true purpose. However, as the discussions ensued and as the participants repeatedly watched the research video, they realized the intention of the project was simply to discover a method by which information could be disseminated more effectively and efficiently to the general public. Once it was understood the video would be used for the purpose of informing citizens of the status of infrastructure improvements already in place or public policies that were already enacted, their concerns were allayed. At that point the conversations turned to an educational connotation, which was decidedly positive (See Appendix K for a summary of the participant interviews).

While the other terms mentioned in the opening statement (e.g. "training" and "awareness") may seem to be an obvious fit with education, the term "cost" involved questions about the efficiency of implementation of such an intervention program. Of the 16 participants interviewed, 15 of them saw the potential in such an endeavor, if only because of the cost effectiveness of using a public service advertising campaign to encourage citizens to change and to generally affect the travel culture in the region. The 16th participant remained unconvinced

such an endeavor would be successful. In the spirit of civil disagreement, the focus group simply moved on to the next topic without resolution.

Key Phrases Pertaining to Question 2

Table 9 below presents a list of key phrases utilized by the participants during the interviews. While the list of specific quotes is not wholly comprehensive, the researcher reached a point when the same topics began to be expressed using different terminology.

Table 9: Key phrases, as grouped by the researcher to address Research Question 2

Key phrases used by participants	Over-arching themes
If a video like this went viral, I think it could affect a lot of travelers	Education
With the potential of the Internet, viral videos are the way to go	
The video was straightforward, so people can see how to act in a certain situation	
Producing something like this would be a whole lot cheaper than some of the other programs I've heard of	
I think of the old Smokey the Bear public service ads, and how well they worked - "only you can prevent forest fires"	
There are still people who don't know when to stop for school buses. Something like this - that shows a quick scenario - might be a lot more effective	
I would have never thought smoking would be nearly eradicated, but it has been. I think public service ads like this were the key.	

Summary

Based on the results of the interviews conducted over a two month period, with a purposive group of denizens representing people who are familiar with travel through the Conway CDP, a definitive list of topics the participants believed were important considerations, necessary to address the concerns of the two research questions was generated. The next chapter in the study – the final chapter of the dissertation – summarizes and discusses the results of this study as they relate to existing literature, while also presenting implications to the field of public affairs and identifying recommendations for both practice and further study.

CHAPTER 5: DISCUSSION

<u>Overview</u>

One of the more fragile predictors of walking – self-efficacy – is grounded in perception; and people's perceptions have been found to be impacted by mass media (Abioye, Hajifathalian, & Danaei, 2013; Cavill & Bauman, 2004; Moeller, de Vreese, Esser, & Kunz, 2014). While some argue that the effectiveness of persuasive media is measured by the degree to which it influences a targeted audience (Ball-Rokeach & DeFleur, 1976; Cavill & Bauman, 2004; Mogg & Enis, 1974; Wirtz, 2009), such media can nonetheless convey conflicting messages, exerting influence over multiple audiences albeit in different ways. These points have been the crux of the arguments for this research study. The following sub-sections discuss the implications of the Findings chapter, especially as those findings serve to address the two research questions. This chapter concludes with recommendations for future study and a comprehensive summary of the entire work.

<u>Purpose of the Study</u>

The literature reflects a well-established correlation between the built environment and behavior (Khan, Kockelman, & Xiong, 2014; Ma, Dill, & Mohr, 2014; Munshi, 2016; C. Y. Yu, 2015). Social Cognitive Theory (SCT) – one of the theoretical frameworks on which this dissertation is guided – posits behavior constantly influences and is being influenced by a "triad of cognition, the environment, and social stimuli" (p. 50) – all three of which encompass Bandura's Triadic Reciprocal Determinism (TRD) (Burnett, Enyeart Smith, & Wessel, 2016).

This TRD model runs counter to the idea that human behavior can best be explained in terms of "unidirectional causation" (Bandura, 1999, p. 265), where behavior is affected by environmental and/or internal influences, while the latter two are supposedly not affected by the former in the same manner. This last point is important in that it suggests that each element has a definite effect on the other two. Moreover, as it pertains to this study, the researcher asserts the notion perception is affected by behavior as well (i.e. those travelers who do not walk form a particular perception about walking, which may not necessarily be accurate.)

Substantiated by this is that fact some studies have found that many people – even in those who lived in communities traditionally considered friendly to active commuters – choose not to travel in that manner for transportation, presumably out of fear. These findings led researchers to believe that other factors besides just the built environment had an adverse impact on behavior. Ma, et al. (2014) discovered traveler perception of the environment, for instance, had a greater effect on cycling behavior than the actual environmental conditions. This finding was paramount in a study designed to discover impediments to bicycle riding, in that it affirmed the power of people's perception over the reality of the build environment. Moreover, researchers determined coupling infrastructure improvements with an intervention would function to improve people's perception of the travel environment, which could potentially increase the likelihood those study subjects would ride their bikes on public roadways.

Similar to the 2014 Ma study and others that pertained to traveler perception, the purpose of this study was to discover the effects positively-themed mass media messages that modeled civil travel behavior might have in order to enhance commuter self-efficacy. Then, noting that the literature review above also suggested coupling an intervention with improvements to the physical environment, a secondary purpose of the research was to learn how persuasive

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broadcast media might effectively function as a proxy for an intervention to satisfy the findings of the aforementioned studies.

Summary of the Study

The researcher used a qualitative research design approach that combined face-to-face interviews and two follow-up focus group sessions (populated with two sub-groups of closely situated denizens), in order to observe the effect that resulted after repeatedly viewing a short, one-minute video in a controlled setting. Subjects were assigned to one of two separate groups, the membership of which was contingent on the degree to which the study subjects were familiar with active (i.e. human-powered) transportation, such as walking, riding a bicycle, or even using public transportation. The video they were asked to watch presented a number of travel scenarios and was specifically chosen because of the calming nature of the content and because the concept of self-identity (as introduced in the Literature Review). The researcher hoped to use the video to elicit responses relevant to the two pre-conceived research questions. With regards to the first research question, the researcher sought to query travelers familiar and/or potentially familiar with the travel environment of the Conway CDP, in order to ascertain how the positively-themed content of the video might affect the self-efficacy of the commuters / potential commuters. The second research question sought to discover the effectiveness of the same (or similar) video for use as a proxy for an intervention that served to bolster the use of active modes of transportation.

<center>Discussion</center>

<center>What Central Florida commuters want</center>

Well prior to this study, Wright (2015) surveyed residents of the tri-county region of Central Florida (i.e. Orange, Osceola, and Seminole counties) and found that while nearly 96% of respondents "drive at least occasionally to get where they need to go" (p. 4), 93% answered that "Central Florida needs a more balanced transportation system - including increased transit options like trains and more buses" (p. 4). Furthermore, it was established that "In the public mind, the transportation system as a whole needs to evolve away from reliance on automobiles and toward public and active transportation modes" (p. 4). Specifically, 56% voiced their desire for expanded bus and/or rail options and 23% endorsed options such as systems that support and promote walking and/or bicycling. Conversely, improving roads (which included both widening the system's current roadways and constructing new ones) garnered only 22% of the responses.

The findings of this study serve to substantiate the Wright findings: Local travelers overwhelmingly want a travel environment that has a diversity of travel options. Unfortunately, the opportunity to achieve success in that respect has been limited by past development patterns that have resulted in a sprawling region – elevating the necessity for automobile travel as roads have been increasingly scaled to cars instead of humans. Nonetheless, being that the study subjects were all denizens of the surrounding region and being the Wright study reflected exceptional support for change in the region's transportation priorities (p. 4), these facts are noteworthy in that they have served to unify the members into a loose-knit social construct of sorts, with which they all share a common desire: improved transportation options. Though the demographical data collected by the researcher reflects diversity across race, age, income,

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residency, and educational attainment; the common theme shared among all participants was the region in which they lived and traveled.

Self-identity

This was an important fact in explaining the effectiveness of the video on affecting the attitudes and perceptions of the study subjects. As was explained earlier in this study (see the sub-section Affecting Human Behavior in the Literature Review chapter), the concept of self-identity is a phenomenon that focuses on people's social identity – how they sense who they are based on their particular set of group membership(s) (Tajfel, 1979). In this case, group membership transcends those categories identified in the demographic interviews and manifests in the one aspect the participants seem to share in common: the community of fellow travelers.

Again referring to the video, given that participants were asked to watch the video a total of nine times over the course of the study (i.e. three times during the individual interview, three more times during the small focus group session, and then another three times during the larger, combined focus group session) and noting the deliberate similarities between the travel environment presented in the video and the Conway CDP with which the viewers were familiar (e.g. road speed, suburban community, etc.), it could be assumed a connection (an identity-link) was established. Such a connection would be the logical result of possessing a common social identity, where the group was able to identify with the images and actors in the video, if only because those images resonated and were consistent with the viewers due to any pre-existing desires by the group to improve the travel environment in their community, as was suggested by the Wright (2015) study. The video showed a place where bicyclists (and presumably pedestrian travelers) are treated with respect (i.e. at least on par and/or sharing the same rights as those

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travelers traverse the same facilities as motorized traffic). The idea of the potential for the same to exist locally was measured by the participant responses recorded during the interviews and sessions.

Affective conditioning

Another force working to produce a positive change effect subsequent to watching the video was a loose example of affective conditioning. The psychology behind affective conditioning is that when one item is juxtaposed in close proximity to other items with which people already feel positively about (e.g. sunny weather, cute babies, puppies, etc.), one's perception of the original item is positively affected. As was noted in the Literature Review, the Dempsey and Mitchell (2010) study involved two different brands of writing pens – one with presumably better properties than the other. The experiment simply showed study subjects both styles of pens, all the while being careful to associate controlled photos with each style. For instance, they associated positive images with the pen deemed of a lesser quality and vice versa. They did so to see the effects of affective conditioning on the subjects. The experiment yielded a 70-80% success rate (i.e. people selected the pen associated with the positive images overwhelmingly, even though the other pen was better.) So, as it pertains to this study, the positively-themed media clip served to help "sell" the often ill-perceived travel environment of Central Florida. Where the previous sub-section addressed the fact repetition is unnecessary when marketing an idea to a group where the idea and the group identities are aligned (i.e. the message appeals to group members when the attempt is to capitalize on social identity), repetition is requisite with regards to affective conditioning, as the connection between the

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images must be established by the juxtaposition of the images in close proximity to one another. Repetition simply reinforces this association.

Recommendations for Future Study

The Community Selection process of this dissertation began by establishing boundaries – as determined by the scope of the Texas Transportation Institute's *Dangerous by Design* study, which was focused solely on the Orlando-Kissimmee-Sanford MSA. Though the various jurisdictions that constitute that MSA were certainly appropriate, the researcher would nonetheless expand the study limits to encompassing a greater number of communities (to include incorporated areas) and then structure the same study, drawing denizens from multiple communities for the analysis. For instance, while the Conway CDP still has a certain rural flair in some of its areas, visitors to the area might dispute that, making the assumption the suburban community is distinctly urban in character. From the traffic volume, the school populations, the density of the neighborhoods – another community might be found that provides a greater representation of a "rural" area.

Another aspect of the study that bears mention for future study is the primary focus on pedestrian and/or potential pedestrian traffic. Given that communication is a two-way street, it could be suggested the scope of such a future study be expanded to include both motorists and vulnerable travelers, again using positively-themed media messages.

Summary

The purpose of this study was to determine the effect positively-themed media has on the perceived self-efficacy of vulnerable (e.g. active or human-powered) travelers. At the onset of this work, the researcher was well versed in the initiatives being implemented to achieve a positive impact in affected communities, though he was careful to bracket the semi-structured questions to be used in the interviews in order to minimize bias. As was noted at the beginning of the dissertation, this study was not an attempt to undermine those or any other existing efforts, but, on the contrary, to enhance their effectiveness and to provide greater insight into the psyche of active commuters. It is in this spirit the researcher hopes these works are received.

With regards to implications of this study on the field of public affairs, agencies and policymakers can use these findings as support for initiatives that call for a two-fold approach to addressing public safety issues concerning vulnerable travelers. Specifically, noting the images that appeal most to motorists who view media may be vastly different than those images important to pedestrian travelers, and for different reasons. As the review of recent literature revealed and highlighted, pedestrian travelers often harbor concerns about the travel environment that manifest differently, depending on whether or not a person is walking, riding, or driving a motorized conveyance. For this reason, media initiatives should consider these differences as they attempt to educate travelers and/or modify traveler behavior.

APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Daniel P Stephens, MPA**

Date: **November 15, 2017**

Dear Researcher:

On 11/15/2017 the IRB approved the following human participant research until 11/14/2018 inclusive:

Type of Review:	UCF Initial Review Submission Form
	Expedited Review Category # 6 & 7
Project Title:	Effects of electronic media messages on the perceptions of pedestrians and potential pedestrian commuters living in the unincorporated Central Florida community of Conway
Investigator:	Daniel P Stephens, MPA
IRB Number:	SBE-17-13401
Funding Agency:	
Grant Title:	
Research ID:	N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at https://iris.research.ucf.edu .
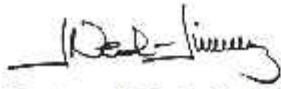
If continuing review approval is not granted before the expiration date of 11/14/2018, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a signed and dated copy of the consent form(s).

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

This letter is signed by:

Page 1 of 2

Signature applied by Jennifer Neal-Jimenez on 11/15/2017 04:51:14 PM EST

Designated Reviewer

APPENDIX B: PERMISSION TO USE COPYRIGHTED MATERIAL

From: Daniel Stephens [mailto:Daniel.Stephens@ucf.edu]
Sent: 02 June 2017 21:09
To: Hurley, Lynda
Subject: Request to use your intellectual property in my doctoral dissertation

Lynda Hurley
Department of Environment
Road Safety Division
Head of Road Safety Operations
Clarence Court
Belfast , Northern Ireland

Re: DOE Road Safety Cyclist Safety video (https://youtu.be/dXXwtP0MWKo)

Ms. Hurley:

I am completing a doctoral dissertation at the University of Central Florida (Orlando, Florida, United States) entitled, "Effects of electronic media messages on the perceptions of pedestrian commuters living in the unincorporated Central Florida community of Conway." Because your video *DOE Road Safety Cyclist Safety* offers an excellent example of cooperation and civility between travelers, I would like your permission to use it in my dissertation. Specifically, I would like to have the ability to show the video to two or more small focus groups comprised of approximately 20 participants per group. Furthermore, being that I intend to offer supplemental printed materials to support the video viewing (i.e. allow each participant to have printed excerpts emphasizing certain elements of the video while they watch the same), I would request your permission to reproduce select images from the video for limited use exclusively during the focus group sessions.

Please know this request is for non-commercial purposes only.

The requested permission extends to any future revisions and editions of my dissertation, including non-exclusive world rights in all languages. These rights will in no way restrict publication of the material in any other form by you or by others authorized by you. Your formal response to this email message will confirm that you own or your organization owns the right to the above described material.

If these arrangements meet with your approval, PLEASE SIGN A PRINTED VERSION OF THIS EMAIL MESSAGE where indicated below and RETURN THE SIGNED, ORIGINAL VERSION to me via normal post.

Sign and mail to:
University of Central Florida
Attn: Dan Stephens
1800 Denn John Lane, Suite 04-0269
Kissimmee, Florida, 34744 USA

Lastly, if you could be so kind as to scan the signed document prior to mailing and email me a copy to include in advanced iterations of my dissertation prospectus, I would be most obliged.

Thank you for your consideration and kind regards.
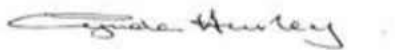
Sincerely,

Daniel P. Stephens, M.P.A.
Instructor
School of Public Administration
UCF Valencia Osceola Regional Campus

Office: 321.682.4337
Facsimile: 407.582.4859
Daniel.Stephens@ucf.edu
ucf.edu

Please note: Florida has a very broad open records law (F.S. 119). Emails may be subject to public disclosure.

Signature

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: _____Lynda Hurley_____
Printed name of addressee

Date: ____5ᵗʰ June 2017_____

Organization: _____Department for Infrastructure Northern Ireland ___

APPENDIX C: DESCRIPTION OF THEMATIC ELEMENTS IN MEDIA

Table 10: Categories of thematic elements used in media, as they pertain to transportation

Content categories	Qualities / events
Positive elements	Actors seem cooperative
	Air of civility
	Kind gestures observed
	Good communication between actors
	Actors seem happy
Negative elements	Death
	Personal injury
	Potential for injury
	Perceived hazards
	Collision
	Harsh language
	Foul gesture(s)
	Rushed / hurried action
	Anxious feeling
Background elements	Bright colors
	Good weather
	Calming background music

APPENDIX D: EVALUATION OF MASS MEDIA

A content analysis was performed on various types of electronic media, including but not limited to videos, still photography, and audio; in order to discover samples that most closely reflect the categories of thematic elements found in Table 10 above. Wayfinding signs, instances of travelers acknowledging one another in a cordial manner, people apparently being cooperative for the common good, and other similar images are the targets for the initial search. Once a fair number was discovered, the analysis used the criteria of Table 10 to qualify approximately ten segments for inclusion in the study. The analysis was designed similar to the community search of this same report, using a coding sheet (TBD).

APPENDIX E: DOE ROAD SAFETY CYCLIST SAFETY VIDEO

Media 1: DOE Road Safety Cycling Safety 1

Source: Road Safety Division, Belfast, Northern Ireland (https://youtu.be/dXXwtP0MWKo)[20]

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[20] Should the video embedded above not function properly, please copy/paste the following URL into an Internet browser in order to view it directly on the YouTube website (https://youtu.be/dXXwtP0MWKo).

APPENDIX F: LOCATION OF STUDY AREA
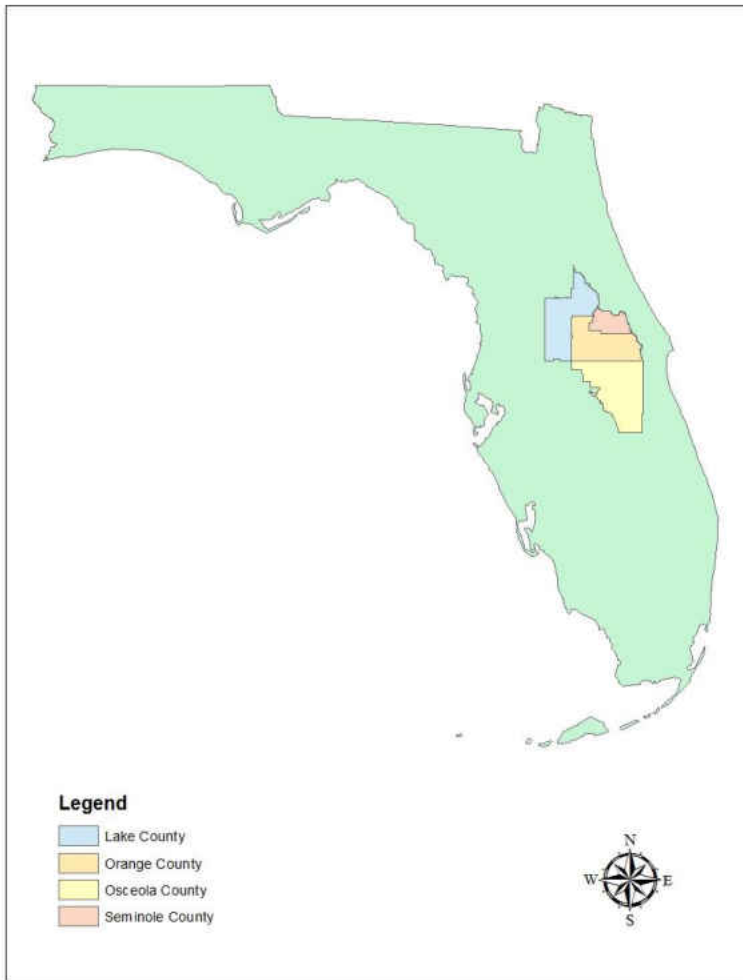
Figure 3: Map showing location of four-county Orlando-Kissimmee-Sanford MSA with State of Florida. Source: Stephens, ArcGIS, March 2017

APPENDIX G: IDENTIFICATION OF CENTRAL FLORIDA CDPs
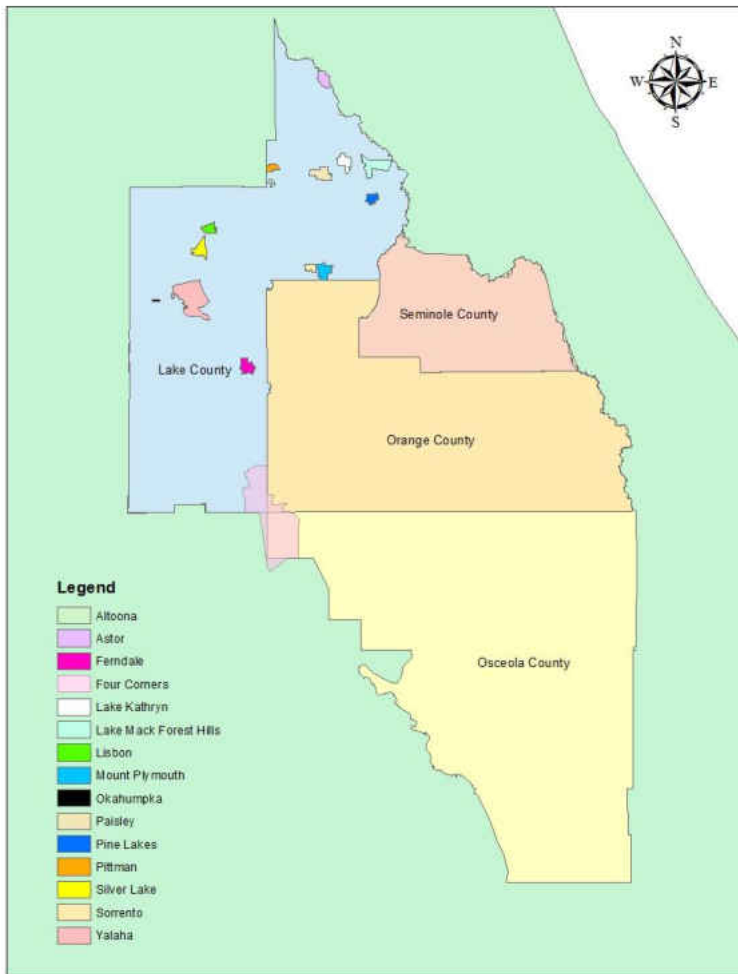
Figure 4: CDPs of Lake County. Source: Stephens, ArcGIS, March 2017

Lake County has 15 CDPs, though only 14 qualify for inclusion as potential communities

for the purposes of this study. One of the CDPs – Four Corners – is situated in multiple counties.

The fact that part of that area lies outside the MSA disqualifies it from consideration for inclusion

in this study, as the *Dangerous by Design* studies, on which this dissertation is partially based,

specifies the Orlando-Kissimmee-Sanford MSA; whereas the Four Corners CDP lies partially in

Polk County.
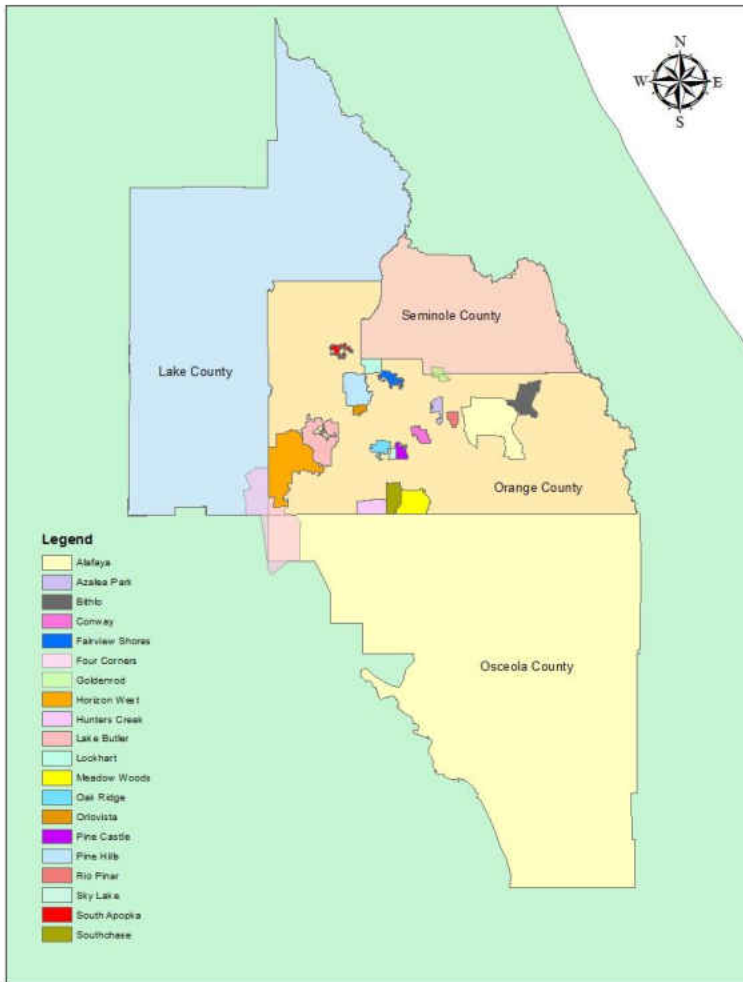
Figure 5: CDPs of Orange County. Source: Stephens, ArcGIS, March 2017

Orange County has 20 CDPs, though only 19 qualify for inclusion as potential communities

for the purposes of this study. While two CDPs – Four Corners and Goldenrod – are situated in

multiple counties, only one (Four Corners) has any area lies outside of the MSA (in Polk County).

Goldenrod is found both in Orange and Seminole counties, though both of these counties are part

of the Orlando-Kissimmee-Sanford MSA. The Four Corners CDP is disqualified from

consideration for inclusion in this study, because Polk County is outside the Orlando-Kissimmee-

Sanford MSA.
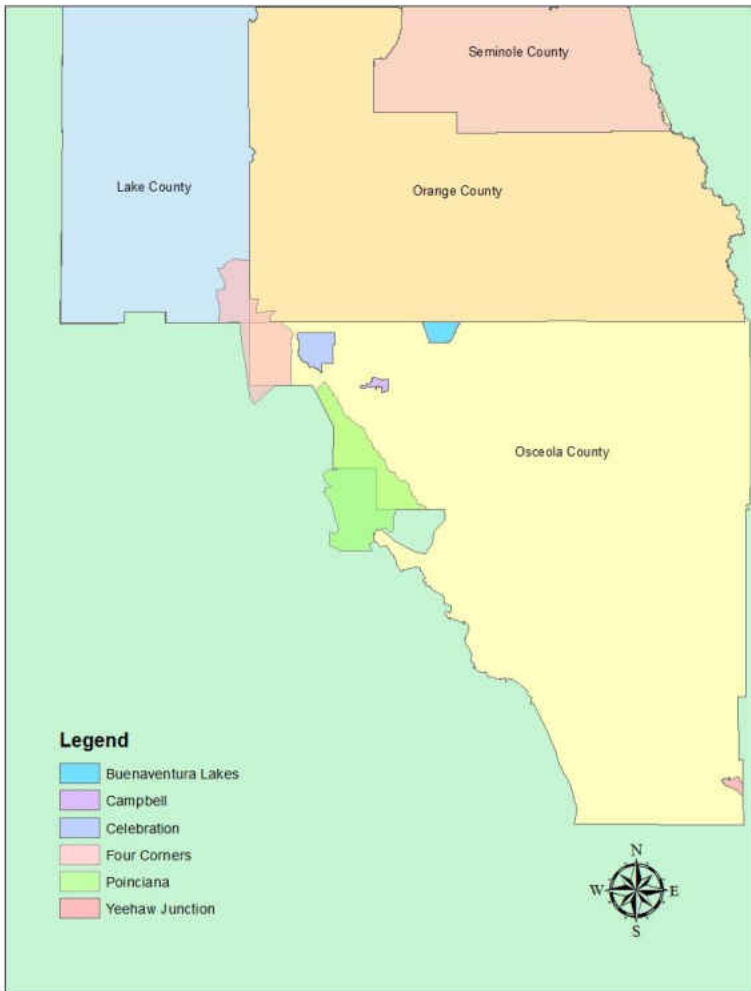
Figure 6: CDPs of Osceola County. Source: Stephens, ArcGIS, March 2017

Osceola County has six CDPs, though only four qualify for inclusion as potential

communities for the purposes of this study. Two CDPs – Four Corners and Poinciana – are

situated in multiple counties. The fact that part of their area lies outside the MSA disqualifies

them from consideration for inclusion in this study, as the *Dangerous by Design* studies, on

which this dissertation is partially based, specifies the Orlando-Kissimmee-Sanford MSA;

whereas the two CDPs in question lie partially in Polk County.
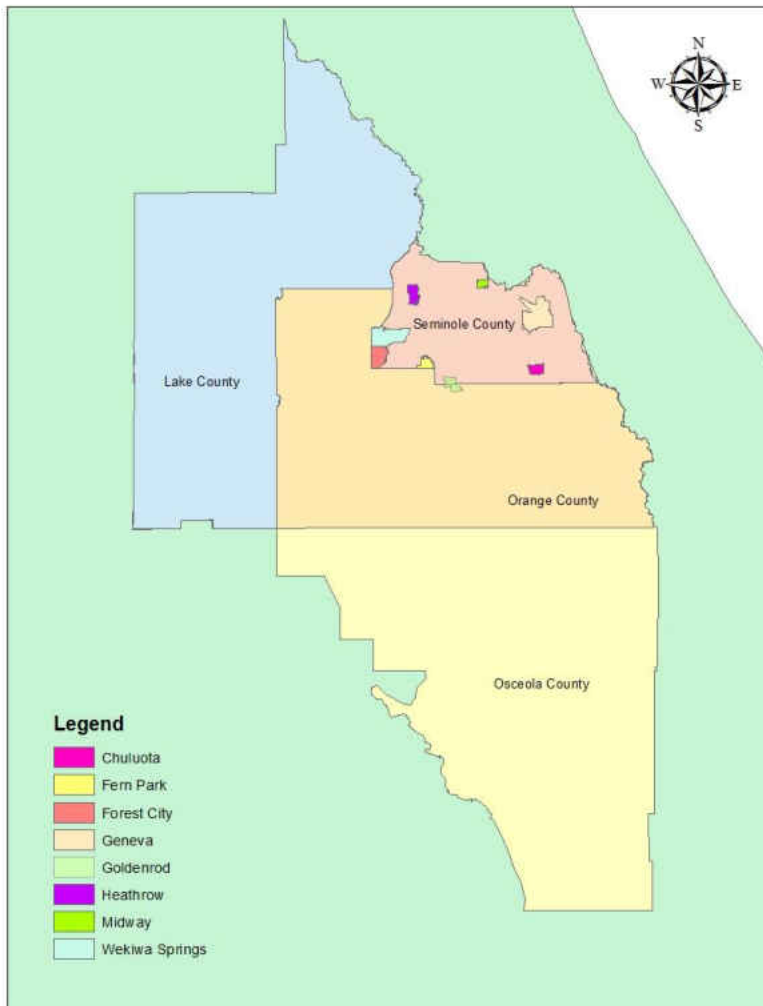
Figure 7: CDPs of Seminole County. Source: Stephens, ArcGIS, March 2017

Seminole County has eight CDPs, all of which qualify for inclusion as potential communities for the purposes of this study. It can be observed from the illustration above that the Goldenrod CDP is situated in multiple counties (Orange and Seminole); however, both of the counties are part of the Orlando-Kissimmee-Sanford MSA.

APPENDIX H: EVALUATION OF CENTRAL FLORIDA CDPs

EVALUATION OF CENTRAL FLORIDA CDPs

As was previously discussed, the four-county region comprising the Orlando-Kissimmee-Sanford MSA (Lake, Orange, Osceola, and Seminole counties) has 47 census designated places. This brand of unincorporated community (the CDP) was identified as the appropriate size and style of community development for inclusion as an experimental group in this study, based on both a subjective assessment on the part of the researcher and on scrutiny of specific, predetermined characteristics and statistics.

The size of the community in terms of population numbers and density, the number of reported pedestrian collisions, median household income, and racial and age diversity were the primary criteria used in the selection process to qualify a community for inclusion. Each criteria is discussed in detail after this introduction. The tables below gauge the performance of each community on these measures.

It should be noted that some of Central Florida's newer communities tout planning that adheres to the principles of the Congress of the New Urbanism (NU), meaning they are now being designed according to responsible growth principles that offer promise in terms of such areas as "trip capture" and "walkability". Baldwin Park and Celebration are two local examples. This study, however, explicitly sought to utilize established conventional suburban communities with separated land uses (e.g. residential, commercial, industrial, institutional, and the like) as they more closely mirror the planning practices that have been used throughout the region over the past several decades. While such areas have the general tendency to discourage utilitarian trips by foot or bicycle due to the distance between residences and jobs, this nonetheless reflects the overall make-up of the area.

<center>Evaluation Criteria</center>

<center>Population and Density</center>

The 47 communities range in population from 44 residents (Lisbon CDP, Lake County, Florida) to over 60,000 (Pine Hills CDP, Orange County, Florida). Because of this, population density also varies considerably amongst the communities. A number of factors can explain these extremes in variation: the degree to which a community is urban or rural, the availability of developable land in the surrounding area, the age of the community, etc. For instance, it was observed the median land area of CDPs in Osceola County (13 square miles) is nearly twice that of Orange County CDPs (8 square miles), three times that of Seminole County CDPs (5 square miles), and four times that of Lake County CDPs (3 square miles). Given that Osceola County is the sixth largest county in the State of Florida – with ample pasture land and forests constituting nearly 2/3 of its total acreage – it stands to reason the CDP communities reflect the norm of the remainder of the county, which is spacious land development. To mitigate the effects of disparities in population, population densities are used as a proxy. Note: Only those CDP communities with a population density of more than 1,000 permanent residents per square mile are suitable for inclusion, as smaller communities would weaken the strength of the findings.

<center>Median Household Income</center>

Again, this statistic varies greatly by community, from Campbell CDP in Osceola County ($28,289) to Heathrow CDP in Seminole County ($132,823). While this statistic typically is indicative of automobile ownership, it is not always the case as Celebration CDP – also in Osceola County – has a relatively very high number of residents who report walking and/or bicycling to work in lieu of driving. Regardless, the goal was to find communities that are socio-

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economically comparable to the median household income of the MSA in order to increase the generalizability of the study.

Racial Diversity

Central Florida is known as a culturally rich diversity region. For instance, the 2015-16 Annual Report for Orange County Public Schools touts the fact that their students come from 200 countries and speak 167 different languages and dialects (OCPS, ND). Though a majority of residents speak English as their first language, Spanish-language speakers makeup more than half of some communities. For this reason, the CDPs selected for this study have demonstrated levels of diversity, as reflected by the statistics of the U.S. Census Bureau.

Number of Reported Pedestrian Collisions

The last metric of the selection criteria reflects the number of pedestrian crashes in the community, as logged via police reports of the various local- and state-level law enforcement agencies from January 2007 to December 2016. As was discussed in the Introduction chapter of this report, pedestrian perception of the travel environment is purported to be greatly influenced by reports of traffic incidents. The status of our region's infrastructure failures have been reported nationally for many years; though arguably, it cannot be assumed that all residents are aware of these reports. However, reports of local traffic mishaps are broadcast regionally via news outlets on a regular basis. When these sensational events occur in familiar, near-by places the events can become more salient, which can presumably affect the perceived self-efficacy of pedestrian travelers adversely. Therefore, this metric was used to identify the degree to which a community may have perceived problems with urban pedestrianism. Note that some areas have experienced a large number of collisions over the years (e.g. Pine Hills = 385 incidents), though

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the same communities have since been retro-fitted with improved infrastructure in order to address the issues. For this reason, a high number of incidents does not automatically qualify a community for inclusion in the experimental group.

<div align="center">Exclusions</div>

Some circumstances may cause a CDP to be excluded from consideration from the pool of potential communities. For instance, some of the CDPs lie in multiple counties. While this fact does not automatically exclude the community (e.g. Goldenrod lies in both Orange and Seminole counties and both of those counties lie within the MSA), though in most cases it does, because part of the community lies in an area outside the study area.

Another reason a community might be excluded from consideration is because of a lack of data to support an accurate conclusion during the analysis phase of the study.

The tables within this Appendix note all exclusions, including the rationale behind the decision to eliminate the community from the list of potential CDPs from which the researcher might source potential participants for the study.

Evaluation Process

Data was collected on all 47 census designated places from the U.S. Census Bureau and the two metropolitan planning organizations that preside over the region: Metroplan Orlando and the Lake-Sumter Metropolitan Planning Organization. As was previously mentioned, the five primary criteria used in the evaluation process were population, density, median household income, racial diversity, and the number of collisions occurring in each CDP. See the following tables, as broken down by the criteria, to see the data as it pertains to the individual CDPs, as well as the county-level and MSA-level median scores. This has been provided so the reader can better understand the large disparities between the communities of the four-county region.

Table 11: MSA- and County-level population, density, and income data

Jurisdiction	Number of CDPs	Total population of CDPs	Mean population of CDPs	Total land area of CDPs *(in square miles)*	Mean land area of CDPs *(in square miles)*	Population density *(per square mile)*	Median household income *(in 2014 dollars)*
MSA	47	533128	11343	317	7	1681	56054
Lake County	15	14672	978	45	3	330	51737
Orange County	20	349723	17486	158	8	2209	51722
Osceola County	6	113027	18838	79	13	1437	48964
Seminole County	8	55909	6989	36	4	1566	79442

Source: Population data was sourced from the U.S. Census Bureau's American Factfinder website (https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml), whereas all of statistics were calculated by the researcher.

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Table 12: Census Designated Place-level population and density data

CDP	County	Population	Land area (in square miles)	Population density (per square mile)	Median household income (in 2014 dollars)
Alafaya	Orange	78113	37.96	2057.80	63022
Altoona	Lake	123	0.5	246.00	46434
Astor	Lake	1742	2.5	696.80	29742
Azalea Park	Orange	12556	3.18	3952.20	35671
Bithlo	Orange	8268	10.73	770.30	50837
Buenaventura Lakes	Osceola	26844	5.58	4675.10	43252
Campbell	Osceola	2639	1.9	1304.60	28289
Celebration	Osceola	7761	10.54	704.90	92199
Chuluota	Seminole	2539	2.2	1154.09	69470
Conway	Orange	13467	3.42	3940.00	66096
Fairview Shores	Orange	10239	3.03	3378.10	41284
Fern Park	Seminole	7632	2.3	3318.26	63076
Ferndale	Lake	469	2.8	167.50	29063
Forest City	Seminole	13571	4.9	2769.59	83142
Four Corners	*Multiple	25521	23.88	223.80	49108
Geneva	Seminole	2683	12.4	216.37	77191
Goldenrod	2x within	12039	2.52	4781.20	39034
Heathrow	Seminole	5522	3.3	1673.33	132823
Horizon West	Orange	14000	32.94	425.00	84215
Hunters Creek	Orange	14321	3.83	3739.20	61834
Lake Butler	Orange	15400	12.22	1260.70	107266
Lake Kathryn	Lake	920	2.9	317.24	no report
Lake Mack-Forest Hills	Lake	568	5	113.60	no report
Lisbon	Lake	44	2	22.00	no report
Lockhart	Orange	13060	4.42	2952.70	47686
Meadow Woods	Orange	25558	11.39	2243.10	47817
Midway	Seminole	1846	1.4	1318.57	28984
Mount Plymouth	Lake	5305	2.9	1829.31	69513
Oak Ridge	Orange	22685	3.57	6356.10	30679
Okahumpka	Lake	48	0.2	240.00	no report
Orlovista	Orange	6123	1.83	3338.60	37880
Paisley	Lake	1159	3.4	340.88	31071
Pine Castle	Orange	10805	2.49	4335.90	32674
Pine Hills	Orange	60076	12.25	4904.60	36423
Pine Lakes	Lake	626	1.7	368.24	no report
Pittman	Lake	279	1.3	214.62	72000
Poinciana	*Multiple	50059	34.86	842.10	45210
Rio Pinar	Orange	5211	2.18	2395.90	81406
Silver Lake	Lake	1555	3.1	501.61	61141
Sky Lake	Orange	6153	1.27	4864.00	33783
Sorrento	Lake	514	1.3	395.38	41592
South Apopka	Orange	5728	2.28	2514.50	32455
Southchase	Orange	15921	6.84	2328.30	52661
Wekiwa Springs	Seminole	22116	9.2	2403.91	101412
Yalaha	Lake	1117	14.9	74.97	85083
Yeehaw Junction	Osceola	203	1.87	128.20	35726

Source: Population data was sourced from the U.S. Census Bureau's American Factfinder website (https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml), whereas all of statistics were calculated by the researcher.

Table 13: Census Designated Place-level racial and cultural data

CDP	American Indian and Alaska Native		Asian		Black or African American		Some Other Race		White		Hispanic or Latino	
	Total	% of total	Total	% of total	Total	% of total	Total	% of total	Total	% of total	Total	% of total
Alafaya	241	0.00	5305	0.07	8126	0.10	5380	0.07	55852	0.72	25448	0.33
Altoona	0	0.00	0	0.00	0	0.00	25	0.20	98	0.80	18	0.15
Astor	14	0.01	24	0.01	0	0.00	10	0.01	1694	0.97	500	0.29
Azalea Park	48	0.00	467	0.04	1294	0.10	1749	0.14	8462	0.67	7413	0.59
Bithlo	53	0.01	301	0.04	592	0.07	333	0.04	6683	0.81	1805	0.22
Buenaventura Lakes	23	0.00	1004	0.04	3390	0.13	3030	0.11	18255	0.68	8890	0.33
Campbell	0	0.00	15	0.01	45	0.02	0	0.00	2477	0.94	2251	0.85
Celebration	0	0.00	319	0.04	207	0.03	89	0.01	6899	0.89	6979	0.90
Chuluota	0	0.00	0	0.00	18	0.01	0	0.00	2461	0.97	2438	0.96
Conway	37	0.00	297	0.02	503	0.04	372	0.03	11935	0.89	2222	0.17
Fairview Shores	44	0.00	383	0.04	1850	0.18	413	0.04	7158	0.70	1438	0.14
Fern Park	22	0.00	85	0.01	647	0.08	295	0.04	6369	0.83	7366	0.97
Ferndale	0	0.00	0	0.00	0	0.00	0	0.00	469	1.00	142	0.30
Forest City	0	0.00	529	0.04	1196	0.09	258	0.02	11269	0.83	13171	0.97
Four Corners	141	0.01	652	0.03	2000	0.08	2249	0.09	19251	0.75	17878	0.70
Geneva	0	0.00	0	0.00	0	0.00	0	0.00	2683	1.00	2666	0.99
Goldenrod	48	0.00	366	0.03	1104	0.09	771	0.06	9340	0.78	2671	0.22
Heathrow	25	0.00	222	0.04	183	0.03	0	0.00	4937	0.89	5324	0.96
Horizon West	47	0.00	1146	0.08	893	0.06	519	0.04	10913	0.78	2766	0.20
Hunters Creek	43	0.00	971	0.07	1089	0.08	1210	0.08	10446	0.73	5094	0.36
Lake Butler	24	0.00	1441	0.09	1018	0.07	250	0.02	12312	0.80	1721	0.11
Lake Kathryn	0	0.00	0	0.00	0	0.00	0	0.00	920	1.00	179	0.19
Lake Mack-Forest Hills	0	0.00	0	0.00	0	0.00	0	0.00	568	1.00	0	0.00
Lisbon	0	0.00	0	0.00	0	0.00	0	0.00	44	1.00	0	0.00
Lockhart	61	0.00	486	0.04	2960	0.23	661	0.05	8342	0.64	2757	0.21
Meadow Woods	98	0.00	1171	0.05	3527	0.14	3888	0.15	15644	0.61	17185	0.67
Midway	0	0.00	0	0.00	1800	0.98	13	0.01	33	0.02	1809	0.98
Mount Plymouth	0	0.00	44	0.01	392	0.07	116	0.02	4625	0.87	307	0.06
Oak Ridge	126	0.01	986	0.04	9072	0.40	2550	0.11	8813	0.39	9990	0.44
Okahumpka	0	0.00	0	0.00	0	0.00	0	0.00	48	1.00	0	0.00
Orlovista	63	0.01	419	0.07	2349	0.38	594	0.10	2325	0.38	1308	0.21
Paisley	0	0.00	0	0.00	1	0.00	27	0.02	1131	0.98	27	0.02
Pine Castle	83	0.01	522	0.05	1831	0.17	1257	0.12	6673	0.62	5252	0.49
Pine Hills	280	0.00	2259	0.04	40611	0.68	3076	0.05	11783	0.20	8324	0.14
Pine Lakes	0	0.00	0	0.00	10	0.02	0	0.00	598	0.96	173	0.28
Pittman	0	0.00	0	0.00	95	0.34	0	0.00	184	0.66	0	0.00
Poinciana	134	0.00	521	0.01	12981	0.26	5580	0.11	28129	0.56	24239	0.48
Rio Pinar	8	0.00	233	0.04	334	0.06	199	0.04	4320	0.83	1312	0.25
Silver Lake	0	0.00	48	0.03	118	0.08	4	0.00	1378	0.89	91	0.06
Sky Lake	43	0.01	168	0.03	1024	0.17	634	0.10	3933	0.64	3205	0.52
Sorrento	0	0.00	0	0.00	0	0.00	0	0.00	514	1.00	397	0.77
South Apopka	31	0.01	27	0.00	3673	0.64	341	0.06	1539	0.27	1013	0.18
Southchase	52	0.00	1751	0.11	2234	0.14	2214	0.14	8875	0.56	7755	0.49
Wekiwa Springs	0	0.00	781	0.04	194	0.01	384	0.02	20561	0.93	21805	0.99
Yalaha	0	0.00	48	0.04	15	0.01	0	0.00	1003	0.90	155	0.14
Yeehaw Junction	0	0.00	0	0.00	0	0.00	0	0.00	203	1.00	190	0.94

Source: Population data was sourced from the U.S. Census Bureau's American Factfinder website (https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml), whereas all of statistics were calculated by the researcher.

Table 14: Census Designated Place-level collision data

CDP	Pedestrian collisions (2007-2016)
Alafaya	129
Altoona	0
Astor	0
Azalea Park	48
Bithlo	33
Buenaventura Lakes	53
Campbell	19
Celebration	13
Chuluota	8
Conway	31
Fairview Shores	83
Fern Park	41
Ferndale	0
Forest City	25
Four Corners	35
Geneva	5
Goldenrod	40
Heathrow	2
Horizon West	9
Hunters Creek	34
Lake Butler	6
Lake Kathryn	0
Lake Mack-Forest Hills	0
Lisbon	0
Lockhart	48
Meadow Woods	29
Midway	4
Mount Plymouth	0
Oak Ridge	159
Okahumpka	0
Orlovista	61
Paisley	0
Pine Castle	54
Pine Hills	385
Pine Lakes	0
Pittman	0
Poinciana	73
Rio Pinar	7
Silver Lake	0
Sky Lake	62
Sorrento	0
South Apopka	21
Southchase	52
Wekiwa Springs	14
Yalaha	1
Yeehaw Junction	1

Source: Population data was sourced from the U.S. Census Bureau's American Factfinder website (https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml), whereas all of statistics were calculated by the researcher.

After an analysis of the data aforementioned qualities of the 47 CDPs, an algorithm was developed to determine the top two communities from among the 47. Unfortunately, three communities scored equally across all measures, leaving the researcher to seek a method to decide between the three remaining communities as well.

The method by which this was conducted is as follows. First, the median scores for the Orlando-Kissimmee-Sanford MSA across all the qualities was determined. Then a simple regression analysis was conducted, with breaks as follows.

For population, the MSA has a median value of 11,343 per CDP. The researcher determined that it was of little consequence as to whether or not a CDP's median population was somewhat higher or somewhat lower than the MSA's median value; therefore all CDP scores were converted to absolute value, and then the comparison was made.

Table 15: Ranking Census Designated Places for inclusion as source of participants

Census Designated Place	County	Population	Density per square mile	Median household income	Racial diversity	Number of collisions
Conway	Orange	13467	3940.00	66096	0.08	31
Azalea Park	Orange	12556	3952.20	35671	0.19	48
Fairview Shores	Orange	10239	3378.10	41284	0.18	83
Goldenrod	Orange	12039	4781.20	39034	0.15	40
Oak Ridge	Orange	22685	6356.10	30679	0.22	159
Hunters Creek	Orange	14321	3739.20	61834	0.17	34
Pine Castle	Orange	10805	4335.90	32674	0.21	54
Pine Hills	Orange	60076	4904.60	36423	0.15	385
Sky Lake	Orange	6153	4864.00	33783	0.19	62
Lockhart	Orange	13060	2952.70	47686	0.20	48
Forest City	Seminole	13571	2769.59	83142	0.12	25
~~Poinciana~~	~~Multiple~~	~~50059~~	~~842.10~~	~~45210~~	~~0.22~~	~~73~~
Horizon West	Orange	14000	425.00	84215	0.15	9
Bithlo	Orange	8268	770.30	50837	0.13	33
Altoona	Lake	123	246.00	46434	0.16	0
Alafaya	Orange	78113	2057.80	63022	0.17	129
South Apopka	Orange	5728	2514.50	32455	0.19	21
Orlovista	Orange	6123	3338.60	37880	0.21	61
~~Four Corners~~	~~Multiple~~	~~25521~~	~~223.80~~	~~49108~~	~~0.15~~	~~42~~
Pittman	Lake	279	214.62	72000	0.22	0
Fern Park	Seminole	7632	3318.26	63076	0.11	41
Buenaventura Lakes	Osceola	26844	4675.10	43252	0.19	53
Meadow Woods	Orange	25558	2243.10	47817	0.21	29
Rio Pinar	Orange	5211	2395.90	81406	0.12	7
Celebration	Osceola	7761	704.90	92199	0.07	13
Pine Lakes	Lake	626	368.24	42404	0.02	0
Southchase	Orange	15921	2328.30	52661	0.22	52
Lake Butler	Orange	15400	1260.70	107266	0.14	6
Chuluota	Seminole	2539	1154.09	69470	0.01	8
Geneva	Seminole	2683	216.37	77191	0.00	5
Silver Lake	Lake	1555	501.61	61141	0.10	0
Paisley	Lake	1159	340.88	31071	0.02	0
Midway	Seminole	1846	1318.57	28984	0.02	4
Campbell	Osceola	2639	1304.60	28289	0.02	19
Yeehaw Junction	Osceola	203	128.20	35726	0.00	1
Mount Plymouth	Lake	5305	1829.31	69513	0.09	0
Astor	Lake	1742	696.80	29742	0.03	0
Yalaha	Lake	1117	74.97	85083	0.05	1
Lisbon	Lake	44	22.00	41335	0.00	0
Wekiwa Springs	Seminole	22116	2403.91	101412	0.06	14
Sorrento	Lake	514	395.38	41592	0.00	0
Lake Kathryn	Lake	920	317.24	31250	0.00	0
Lake Mack-Forest Hills	Lake	568	113.60	31941	0.00	0
Heathrow	Seminole	5522	1673.33	132823	0.07	2
Okahumpka	Lake	48	240.00	16090	0.00	0
Ferndale	Lake	469	167.50	29063	0.00	0

Source: Population data was sourced from the U.S. Census Bureau's American Factfinder website (https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml), whereas all of statistics were calculated by the researcher.

Table 16: Census Designated Place score sheet for ranking

Census Designated Place	Population	Density per square mile	Median household income	Racial diversity	Number of collisions	Total score	Rank of CDP
Conway	1	1	2	3	2	9	1
Azalea Park	1	1	3	1	3	9	2
Fairview Shores	1	3	2	1	2	9	3
Goldenrod	1	1	3	2	3	10	4
Oak Ridge	5	1	3	1	1	11	5
Hunters Creek	3	2	2	1	3	11	6
Pine Castle	1	1	3	1	5	11	7
Pine Hills	5	1	3	2	1	12	8
Sky Lake	4	1	3	1	3	12	9
Lockhart	1	3	2	1	5	12	10
Forest City	1	4	4	2	2	13	11
~~Poinciana~~	~~5~~	~~3~~	~~2~~	~~1~~	~~2~~	~~13~~	~~n/a~~
Horizon West	2	3	4	2	2	13	12
Bithlo	3	3	2	2	3	13	13
Altoona	5	2	2	1	3	13	14
Alafaya	5	5	2	1	1	14	15
South Apopka	4	4	3	1	2	14	16
Orlovista	4	3	3	1	3	14	17
~~Four Corners~~	~~5~~	~~2~~	~~2~~	~~2~~	~~3~~	~~14~~	~~n/a~~
Pittman	5	2	3	1	3	14	18
Fern Park	3	3	2	2	4	14	19
Buenaventura Lakes	5	1	2	1	5	14	20
Meadow Woods	5	5	2	1	2	15	21
Rio Pinar	4	4	3	2	2	15	22
Celebration	3	3	4	3	2	15	23
Pine Lakes	5	2	2	3	3	15	24
Southchase	3	5	1	1	5	15	25
Lake Butler	3	4	5	2	2	16	26
Chuluota	4	4	2	4	2	16	27
Geneva	4	2	3	5	2	16	28
Silver Lake	5	3	2	3	3	16	29
Paisley	5	2	3	3	3	16	30
Midway	4	4	4	3	2	17	31
Campbell	4	4	4	3	2	17	32
Yeehaw Junction	5	2	3	5	2	17	33
Mount Plymouth	4	5	2	3	3	17	34
Astor	4	3	4	3	3	17	35
Yalaha	5	2	4	3	3	17	36
Lisbon	5	2	2	5	3	17	37
Wekiwa Springs	5	4	4	3	2	18	38
Sorrento	5	3	2	5	3	18	39
Lake Kathryn	5	2	3	5	3	18	40
Lake Mack-Forest Hills	5	2	3	5	3	18	41
Heathrow	4	5	5	3	2	19	42
Okahumpka	5	2	4	5	3	19	43
Ferndale	5	2	4	5	3	19	44

Table 16 (above) was ranked according to the following tables.

Table 17: Scoring table for Population criteria, as it pertains to Community Selection

Population	
Comparison to MSA median population	**Score**
<2000	1
2001-2500	2
2501-5000	3
5001-10000	4
10000+	5

Table 18: Scoring table for Population Density criteria, as it pertains to Community Selection

Population Density	
Number of residents per square mile	**Score**
>2000	1
1501-2000	2
1001-1500	3
501-1000	4
<500	5

Table 19: Scoring table for Median Household Income criteria, as it pertains to Community Selection

Median Household Income	
Comparison to MSA median household income	**Score**
<5000	1
5001-15000	2
15001-25000	3
25001-50000	4
>50001	5

Table 20: Scoring table for Racial Diversity criteria, as it pertains to Community Selection

Racial Diversity	
Homogeneity algorithm score[21]	**Score**
<0.05	1
0.05-0.09	2
0.1-0.2	3
0.2	4
>0.21	5

Table 21: Scoring table for Pedestrian Collisions criteria, as it pertains to Community Selection

Pedestrian Collisions	
Comparison to MSA median collisions	**Score**
0-5	1
6-15	2
16-25	3
26-35	4
>35	5

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[21] Homogeneity algorithm is Σ(percentage of each racial category as compared to entire population) multiplied together

APPENDIX I: SELECT COMMUNITY CASE STUDY

The community of Conway, situated in Orange County, between the downtown area of Orlando, Florida and the Orlando International Airport, is a Census Designated Place with a population of 13,467 as of July 1, 2015. The community was selected as a source from which the participants would be chosen primarily because, aside from the fact it is manageable (for the aforementioned land use reasons), the area also mirrors many other characteristics of the region as a whole, including the such measures as density, average family size, per capita income, and homogeneity (i.e. diversity index rating).

Originally settled in the mid-nineteenth century, Conway is one of the oldest suburban settlements in the Central Florida region. One of the first five paved highways built in Orange County was the brick Conway Road from Orlando to Conway, running along what is now Briercliff Drive, Curry Ford Road, and Conway Road, ending at Anderson Road, the center of Conway.

The CDP is primarily residential, excepting for a small number of retail, agricultural, institutional, and light industrial land uses found along Conway Road. Furthermore, there are a few small convenience stores located throughout. Otherwise, the CDP is known primarily as a "driving" community, as most commercial work-, play-, school centers are beyond normal walking distance[22].

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[22] Normal walking distance is typically ¼ mile.

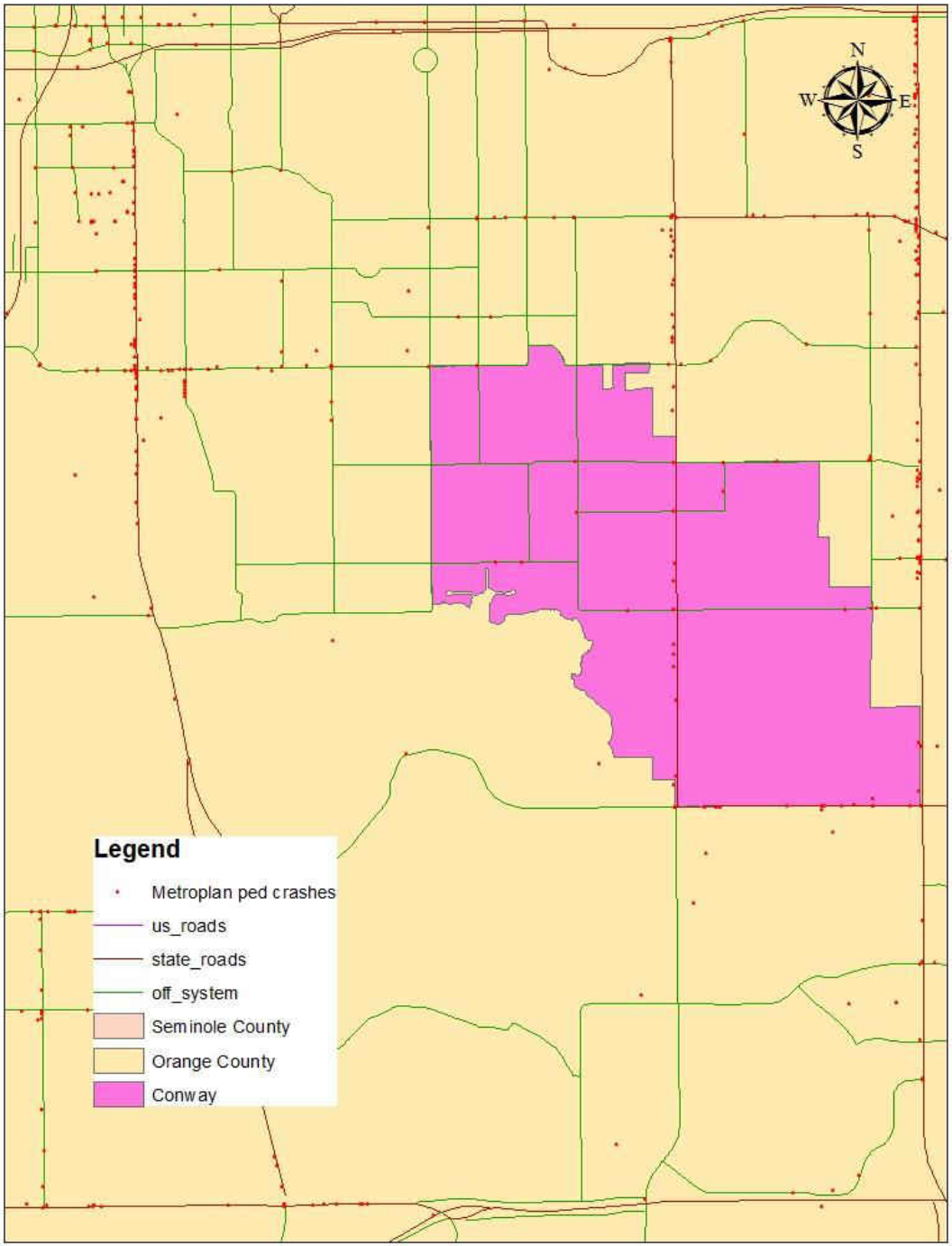Figure 8: Map of Conway CDP in relation to tri-county Central Florida region

Figure 9: Map of Conway CDP showing major roads and pedestrian collisions
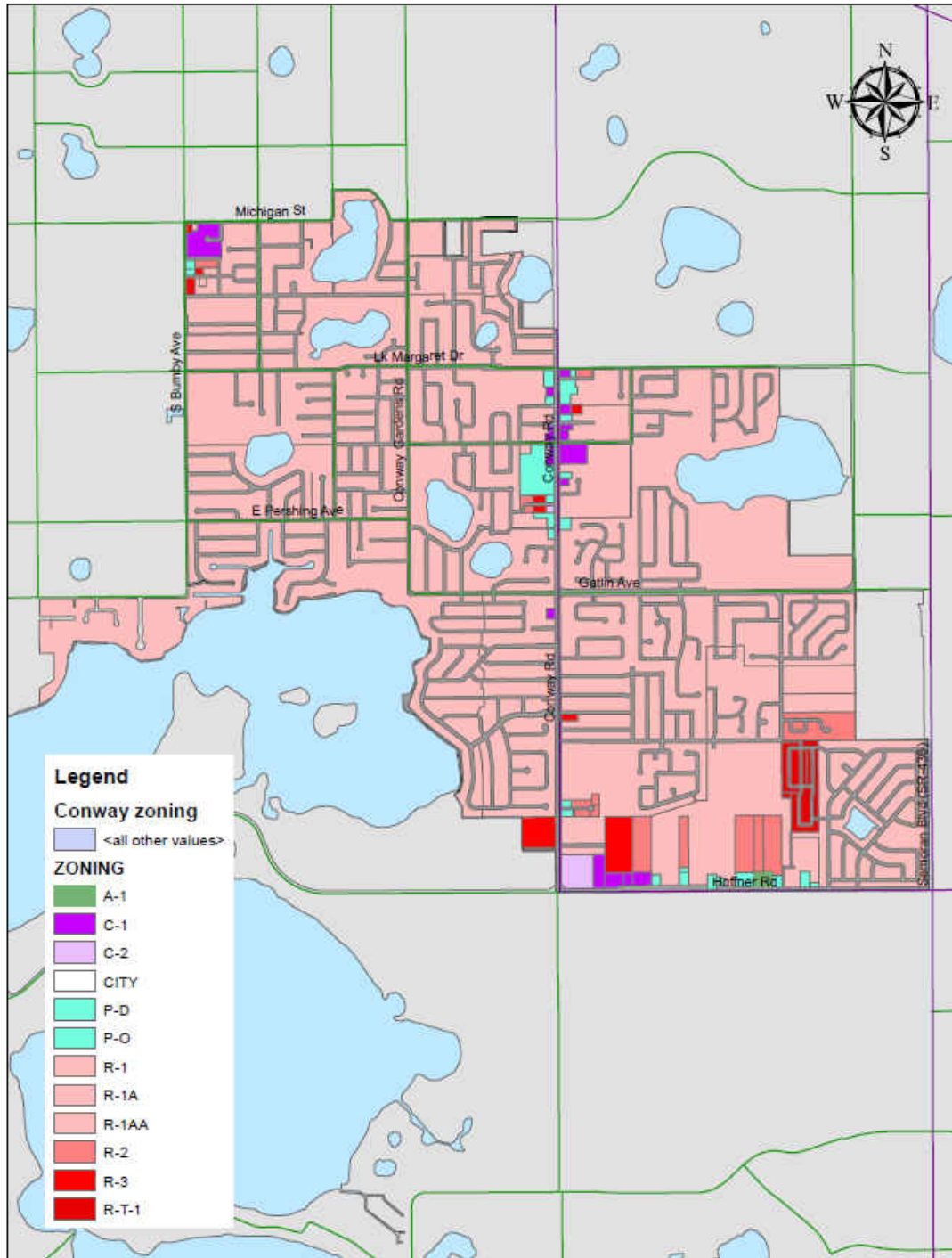
Figure 3: Map of Conway CDP showing zoning categories

APPENDIX J: INFORMED CONSENT DOCUMENT

University of
**Central
Florida**

Effects of electronic media messages on the perceptions of pedestrian commuters living in the unincorporated Central Florida community of Conway

Informed Consent

Principal Investigator:	Daniel P. Stephens, M.P.A.
Faculty Advisor:	Chia-Yuan Yu, PhD
Investigational Site(s):	Orange County Public Library, Southeast Branch

Introduction: Researchers at the University of Central Florida (UCF) study many topics. To do this we need the help of people who agree to take part in a research study. You are being invited to take part in a research study which will include about 10 people residing in the Conway Census Designated Place (CDP) of unincorporated Orange County, Florida. You have been asked to take part in this research study because you reside and/or travel within the Conway CDP. You must be 18 years of age or older to be included in the research study.

The person doing this research is Daniel P. Stephens, a doctoral student at the University of Central Florida. Because the researcher is a graduate student, he is being guided by Dr. Chia-Yuan Yu, a faculty advisor in UCF's School of Public Administration.

What you should know about a research study:
- Someone will explain this research study to you.
- A research study is something you volunteer for.
- Whether or not you take part is up to you.
- You should take part in this study only because you want to.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

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Purpose of the research study: The purpose of this study is to determine the impact that positively-themed mass media elements have on the perceptions of pedestrians and potential pedestrians with respect to self-efficacy as it pertains to travel. In layman's terms, the study hopes to discover and document how positively-themed video/media images affect viewers to the extent that it encourages more people to walk for utility (i.e. walk to school, work, shop, or for recreation / exercise).

What you will be asked to do in the study:

- Participants of this research study will be asked to meet with the Principal Investigator twice within the span of two months.
- In the fall of 2017, participants will be invited to meet individually with the Principal Investigator at the Investigation Site for an initial interview and screening of select transportation-related media.
    - It is estimated this first meeting will take no longer than one hour per participant.
    - This first meeting will be video recorded by the Principal Investigator and/or a neutral research assistant and, after the interviews of all participants are completed, a transcript of the recordings will be produced for future analysis by the Principal Investigator.
    - The interview portion of the first meeting will begin by the participant answering basic demographical questions (e.g. age, gender, race, income range, etc.) as well as questions that relate either to travel or media (e.g. distance to employment / school, favorite past times, preferred types of media, etc.)
    - The media screening – during the same meeting – will expect the participant to watch one or more short videos that emphasize the interaction between various travelers, after which participants will be asked their opinions concerning the media, included but not limited to the degree to which they were/were not affected, their observations, or any other aspects of the video(s) that bear mention. This time period of the meeting will be open-ended, meaning participants will have the liberty to describe their thoughts, feelings, and opinions with only minimal input by the Principal Investigator.
    - Participants may be asked to respond verbally to questions, write/type answers on a survey questionnaire, or utilize other technology (e.g. iClickers, etc.) in order to respond to questions.
- Approximately two to three weeks later – after the initial analysis of the first meeting is completed – participants will be called a second time and assembled to form a small focus group, comprised of approximately 5-9 other participants. During the group meeting, participants will interact with one another, engaging in an open forum discussion covering a diversity of topics related to travel, media, the local community, and the like. Because the discussion will only be semi-structured (i.e. partially guided by the Principal Investigator), the range of topics may include other unforeseen and as of yet unknown subjects. Ultimately, the topics to be included in the second session will be those topics that were most commonly revealed by the participants from the first interview sessions.
    - It is estimated this second meeting will take no longer than one hour.
    - Similar to the first meeting, this second meeting will also be video recorded by either the Principal Investigator and/or a neutral research assistant, after which a transcript of the recordings will be produced for future analysis by the Principal Investigator.

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- Participants will be expected to watch one or more short videos that emphasize the interaction between various travelers, after which participants will be asked their opinions concerning the media, included but not limited to the degree to which they were/were not affected, their observations, or any other aspects of the video(s) that bear mention. This period of the meeting will be open-ended, meaning participants will have the liberty to describe their thoughts, feelings, and opinions with only minimal input by the Principal Investigator.

- Participants may be asked to respond verbally to questions, write/type answers on a survey questionnaire, and/or utilize other technology (e.g. iClickers, etc.) in order to respond to questions.

- Only those who were invited to and who participated in the initial interview are allowed to participate in the focus group meeting.

- Study participants will interact with Daniel Stephens as the sole interviewer during the first meeting (i.e. the interview meeting), but with other members of the focus group and Daniel Stephens during the second meeting.

- All materials necessary to participate in the study will be provided by the Principal Investigator (i.e. It will not be necessary for participants to bring any materials to either session.)

- Once the research project is complete, no other demands will be made on the study participants.

- The research project is anticipated to end no later than December 2017.

Location: All interviews / meetings / screenings will occur in the meeting rooms of the Southeast Branch of the Orange County Public Library at 5575 South Semoran Boulevard, Orlando, FL 32822.

Time required: We expect that you will be in this research study for two meetings of one hour each. The meetings are scheduled to begin in November 2017 and conclude by the end of the same month, though in no case will the meetings go beyond December 2017.

Video taping: You will be video taped during this study. If you do not want to be video taped, you will not be able to be in the study. Discuss this with the researcher or a research team member. The tape will be kept in a locked, safe place, and will be erased once transcripts of the dialogue and other research notes have been produced.

Risks: There are no reasonably foreseeable risks or discomforts involved in taking part in this study. The media messages to be shown present fictious traffic scenarios that stress civility and cooperation between the actors. None of the recorded videos contain any images of injury, violence, death, or suggestions of potentials of the same; or profanity or harsh language, obscene gestures, or the like. However, because so many people have been personally involved in traffic incidence, or know someone else who has been, viewing scenes of this nature can invoke unpleasant memories. For this reason, potential participants may wish to discuss the contents of the media with the Principal Investigator prior to agreeing to participate in this study.

Taking part in this research study may lead to added costs to you in the form of transportation to and from the Investigational Site (i.e. the public library at Hoffner and Semoran) and/or lost wages. This study does not pay for either expense.

Benefits: We cannot promise that you or others will benefit directly from your taking part in this research.

Compensation or payment: This research study involves two phases of data collection: the initial interview / media screening and the focus group meeting. As was previously mentioned, the two meetings will occur at separate times, with the potential for several weeks time to elapse between the two meetings. If you come to the first session and complete the interview / media screening session, you will receive $50 in cash immediately upon completion. If you come to both sessions and complete all the study requirements, you will receive an additional cash payment of $50 at the time you complete the second set of test instruments, for a total payment of $100 per participant

Confidentiality: We will limit your personal data collected in this study to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of UCF.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, or think the research has hurt you, talk to Daniel Stephens c/o UCF Valencia Osceola, 1800 Denn John Lane, Suite 04-0269, Kissimmee, FL 34744 or by telephone (321) 682-4337 or by email at daniel.stephens@ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:
- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.

Withdrawing from the study:
If you decide to leave the study, contact the investigator so that the investigator can remove you from the roster of participants. Note that the person in charge of the research study can remove you from the research study without your approval. Possible reasons for removal include but are not limited to failure to follow instructions of the research staff. Furthermore, the University can also end the research study early. We will tell you about any new information that may affect your health, welfare or choice to stay in the research.

Your signature below indicates your permission to take part in this research.

DO NOT SIGN THIS FORM AFTER THE IRB EXPIRATION DATE BELOW

_____
Printed name of participant

_____   _____
Signature of participant   Date

_____   _____
Signature of person obtaining consent   Date

_____
Printed name of person obtaining consent

APPENDIX K: PARTICIPANT INTERVIEW TRANSCRIPTION SUMMARIES

Participant "A" was a white, female, aged between 45-54 years old. She works as a clerk for the University of Central Florida and has lived in the Conway CDP for more than 10 years. She raised two daughters (who are now grown and living elsewhere), but when those two were young children, the study subject allowed them to walk / ride a bicycle to school through their elementary school and middle school years. It should be noted those two schools are less than one mile from their house. When the daughters attended high school, their mode of transportation to school switched to riding in an automobile, as the school was nearly four miles away.

By most standards, "A" would be considered upper-middle class. While her income was under $50,000 per annum, the household income was considerably more. Subsequently, the family lived in a detached single-family house near the Conway chain of lakes.

During the individual interviews, "A" suggested she was born and raised in the Conway area – never having "lived in an area that allows residents to take public transportation" on a daily basis. She pointed out the Lynx service that runs past her community is not feasible for her, as most trips (to the destinations she frequents) would take nearly 2 ½ hours each way. As for local shopping and/or worship centers, those too are "too far" – plus "A" feared she would have to carry cargo from any shopping trips.

When asked, "Is living or working in the Conway area better than living or working in the general Central Florida area?" she answered the question by telling all the amenities her community affords her family. For instance, "A" walks around her neighborhood for recreation. Specifically, she walks her dog daily around the block, while also visiting with neighbors and strolling past

Lake Conway. She typically takes the same route and is quite comfortable with the speed and volume of traffic that travels through her community. During the interview, she suggested she would be comfortable walking outside of her community, if given the opportunity (i.e. she wouldn't be afraid of traffic). Of course, she also pointed out her community had wide sidewalks along the major thoroughfare, which made her feel more at ease, given the distance of separation from the fast-moving traffic.

When asked, to describe her commute (i.e. "Describe your ideal commute." and "What is the best/worst parts of your commute?") she answered that she dreaded driving in traffic. While she described herself as a competent driver (no tickets), she nonetheless gets nervous driving on highways. "A" expressed her desire to retire to a community, such as the one shown on the video, as she could detect all the residents (actors) were "happy" and "content". She even noted the couple of instances in the video when it appeared there might be a conflict between travelers (42-seconds into the video) the issue was minimal, as "compared to some of the road rage" events she hears about from around her own city.

As for how the video made her feel, she suggested she liked the imagery and the way the video was produced. It was "wholesome", she said. In answering questions that addressed the second research question (i.e. "Do you think repetition (i.e. showing a video over and over, or saying something over and over) can influence the way people believe?" and "Do you think it is possible that a video or public service advertisement could be created that successfully teaches commuters in your area how to get around in a better fashion?") she replied that she sees repetition already being used in this way. For instance, she recalled how television commercials show handsome / beautiful actors when trying to sell their product or services – noting that she has always assumed they want you to think you can look like the actor. (*She specifically

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mentioned the South Beach Diet© television ads showing slender, bikini-clad women on the beach.) Of course, she followed up her point with the fact she, too, purchased their products.

<p style="text-align:center">Participant "B"</p>

Participant "B" was a white, male, aged between 25-34 years old. He works as a meat manager for Publix and has lived in the Conway CDP for 5-9 years. He is married, though he and his wife have yet to have any children. When asked about the idea of allowing them to walk or ride a bike to school, he was hesitant, as he has "heard too many stories of kids getting hit by a car". Being that he is still "climbing the corporate ladder" at his company, and being that they are currently expanding their service area to other parts of the nation, he & his wife have already considered they might be willing to move, should the occasion arise. When the researcher pressed for his thoughts on the type of community they would consider (later in the interview – during the Transportation Preferences questions) he liked the idea of being able to walk in lieu of driving. He then added that an associate with whom he currently works had just that arrangement: He simply walked out of his apartment, across the parking lot to the store where he worked, which was a mere 100 yards away.

"B" confessed he might consider himself a "fairly aggressive driver", though he denied ever being in any actual confrontation with another traveler. With that, the researcher again pressed for more information – though this time the contingency questions pertained to his favorite aspect of the video, to which he replied the low level of stress the actors seem to have.

When asked about the idea of showing such a video, as a public service advertisement on a regular basis, he felt it may not have the intended effect, unless the production was attractive to younger viewers. He also suggested any such approach would need to be refined to reflect what Internet users and/or television viewers like (quick, 15-second spots with a marketable character that appears in each episode). He did, however, note the cost factor might be considerably more efficient than some of the other approaches he's seen.

Participant "C"

Participant "C" was a white, female, aged between 45-54 years old. Throughout the earlier years of her children she has been a homemaker, which she translated to be a "taxi driver". Now that her children have all grown and (mostly) moved out, she works at the family auto parts business, helping her husband with the office work and the business aspect of managing the store. They have lived in the Conway CDP for most of their lives, having met in high school. Financially, they do well (>$50K) and so they live in a fairly sizable detached single family home, next to one of the area's regional parks. She walks regularly – though only for exercise. As we talked, she reminisced about taking her children (when they were smaller) to the park on a regular basis: They would all ride their bikes the distance of approximately ¾ mile.

Having never lived in a community with a strong transit presence, "C" was unsure of the idea of having to rely on such a system, though admittedly the idea did appeal to her – given the right circumstances. Now that her kids have grown, she said she is much more open to the idea, though it is still "years down the road" because they still have the business. As the researcher

pressed with other questions to have her elaborate on the idea of living as such, albeit here in the local community, she briefly entertained the idea by trying to calculated the distance to different attractors from her house, which was to include the paths she'd take. According to what she derived, the grocery store (where she currently shops) is approximately two miles away. There business would be out of the question (ten miles away), but their church and other little stores are "doable".

When asked about the video, she said she liked it, especially the "atmosphere". She compared it to her own community (which made her think twice about her own neighborhood, as she's had a few "people zipping down the street on their way to the local high school"). The researcher bluntly asked if this video were programmed to be shown on local media outlets, did she think people would change their driving habits, she responded, "it would take some doing". She then volunteered to clarify her statement. Specifically, she thought the idea of using a video like this could be a good idea, though she prefaced her statement by suggesting the actors and location would have to be local. A key she thought would make the initiative successful was to make it "relatable" to the viewers (i.e. they would have to see thing familiar to them, such as places around their own neighborhood, which would serve to keep their interest).

Participant "D"

Participant "D" is a homeless white, male, in the age range of 65-74. He is currently employed as a laborer – doing manual labor as one job and driving a cargo truck as a second job. Both he and his wife of 32 years have lived in and around the Conway CDP for most of their

lives. While they currently live in some woods near Pine Hills (next to a house where the person who is also his employer allows them to stay in his barn occasionally, such as when it is overly cold) he is in the Conway area frequently, because he "delivers a lot of cargo to the Orlando International Airport" (which is nearby). Neither he nor his wife have a car (nor have they owned one in over 15 years), so they frequently walk or take the bus. They don't currently watch a lot of television, because they can't; but when they have a place to stay, they watch network T.V. shows. When asked about his thoughts about the video, he was initially skeptical about the idea people would act so courteous to each other. He then proceeded to share some stories of his experiences as a U.S. service member in Viet Nam (pre-1970), during which he witnessed how that culture traveled at a much faster pace. When asked if he thought it might be possible to find such a community elsewhere, he thought twice and agreed. Then, when asked if he would like to live in that type of community, he seemed to be indifferent. The researcher might add, however, he has no teach and his attire is quite dirty. It could easily be assumed he does not associate with many people who are pleasant to him, which might explain his response.

When the topic of the effectiveness of showing videos repeatedly in order to help "teach" the general public about traffic safety and other traffic-related behavior, he was decidedly against the idea, though his rationale was that this idea constitutes "propaganda" and is "un-American". Seeing the position of the respondent, the researcher opted to forego any other questions regard that aspect of the study.

Participant "E" is a white, male, "in his 50s", who works as a consultant to local

governments around the nation. He is also a self-proclaimed avid cyclist, though he drives a car

for work, shopping, church, and the like. His cycling, he said, was merely for recreation, as he

needs to wear a suit most other times.

When shown the video, he immediately embraced the idea of living in such a community.

Because of his experience of riding his bicycle on the local roadways, he is confident though

cautious of other travelers. His community is a little closer to the downtown area than some of

the other participants, so he is accustomed to heavier traffic that ventures off Orange Avenue.

Nonetheless, if given his choice, he suggested he would rather live in the manner shown on the

video than in the area. He then quickly explained that he likes his community, but the thought of

the "utopia" on the video was "tempting".

When asked about his ideas on how safe the local area is with regards to kids,

pedestrians, senior citizens, bicyclists, etc., he answered with a decidedly political response…"it

depends". He elaborated by saying most of the people in his small "neck of the woods" were

courteous and would certainly yield to seniors and children. He also mentioned his neighborhood

was "older" (suggesting the drivers were older and more experienced) and so he didn't recall

seeing anyone speeding through his neighborhood. Overall, he rated the area a "8 out of 10" on

the safety scale (with 10 being the safest and 1 being the least safe).

His answers to the questions addressing research question two were curious. For instance,

he thought the idea would certainly be effective, "as he uses the same technique with his

consulting firm", where he shows a video / slide show that illustrates what he hopes to achieve

(…and what he encourages his clients to emanate). While the researcher thought that answer would suffice to be in agreement with the intention of the study, Participant "E" then expounded on his answer to explain the perceived dangers of "programming" people with any ideas not of their own mind. While he stopped short of disregarding the thought as a bad idea, the researcher could nonetheless sense the hesitancy in his answers.

<p align="center">Participant "F"</p>

Participant "F" is a single, white, female, between the ages of 45-54 years old. She is a working professional (psychologist) who works mostly from an office directly across the street from her home. She moved to the area after a divorce (nearly 10 years ago), where she previously lived in Washington, D.C. "F" is one of the few participants of this study to have lived in an area where the person was able to use public transportation regularly (and she did.) As she and the researcher talked, she noted the stigma that seemed to exist in the Central Florida region – that "only poor people take public transportation". She then let me know she makes over $100K per annum, and did so when she lived up north as well. "Quite a different experience up there", she said sadly.

Realizing she was willing and able to move (as her vocation and her financial standing presumably allowed), the researcher asked about the community in the video – specifically if she might be amenable to living in such a place, to which she enthusiastically responded, "yes!" Then, she assured the researcher she was actually happy with her current living arrangement, which she explained was important for anyone (i.e. "to be satisfied with their life"), as "too much stress can kill you".

When asked about the idea of helping teach others in the community about travel behavior by showing people exhibiting civil travel behavior in a public service advertisement and showing it repeatedly to gain the greatest impact, she agreed the idea was sound and probably "the cheapest way to accomplish that". She acknowledged she was already well aware of Central Florida's dismal standing with regards to its pedestrians and bicycles, so she shared that she was even more excited to be part of a study that addressed the same.

Participant "G"

Participant "G" was a 27-year old female, who is a newly mom. She previously worked as a paralegal, but her husband is now the sole source of income for the family. Being that he is a computer programmer ("one of the few left around here") they still make good money and so their home and neighborhood reflects the same. She grew up traveling the world as an "Army brat", so she shared that she has had the opportunity to live in places with decent public transportation systems. Due to security concerns, however, she typically did not venture too far from her father's duty station, so her experience actually riding public transportation was limited.

After watching the video for the third time, she said, "it grew on her" as to how nice it would be to live in such a place. She noticed everyone was nice to each other, that everyone worked together "as a team" to make the traffic flow, and everyone "looked into each other's eyes" instead of looking down and "pretending not to see the other person". She said that was one of her favorite aspects of the scenarios – people got along with each other.

Her impression of the safety of her existing residence was that her neighborhood was "pretty decent" as far as drivers. She sees a lot of joggers around, though she's not one of them.

Because her baby is still quite young, she doesn't get out as much as she would like, though she confessed she is looking forward to getting back in shape. Presumably, she is going to do that locally, because she said she does not like the "gym environment".

When the researcher asked her thoughts about how effective she thought it would be to show such videos in order to help change the travel culture, she liked the idea. She recalled a number of commercials on the television where the idea they were selling appealed to her. She explained these were typically commercials on local network stations that played the same commercial over and over again. "After a while", she interjected, "you just give in and watch the damn thing, even though you've already seen it fifty times before!"

Participant "H"

Participant "H" is a professional driver, working for a local freight company to pick up and deliver cargo to and from businesses in and around a seven-county service area. He has been a local resident of the Conway CDP for more than 10 years. He is a single father with a daughter who is "in elementary school". He is white, non-Hispanic, and makes just under $50,000/per annum.

Of all the participants of this study, his views on automobile primacy was decidedly the most biased (i.e. his day-to-day experiences driving a cargo truck seem to have skewed his perception concerning pedestrians and bicyclists, as he "does not think too highly of them"). As the researcher pressed for more, he recalled numerous times people simply walked across the street in front of him, or cross his path, resulting in a number of near-miss collisions. He added the weight of his cargo truck, and the fragility of his cargo makes stopping a difficult task on

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occasion. Nonetheless, he was happy and anxious to be part of this study, as he offered a unique perspective to the conversations.

Over the course of watching the video for the first three times, the researcher noted a distinct change in his body language from one viewing to the next. It was assumed his job of being confined to traffic situations could be highly stressful; however, given the calming nature of the video, one could see his demeanor ease with each viewing. Moreover, as the actors were introduced through the video, a smile emerged on more than one occasion.

When asked about the prospect of living in a community where traffic matters would be at the same pace as was shown in the video, he was definitely in favor of the idea. Of all the participants, he was the only one to actually voice the idea the two communities (the one on the video and the Conway CDP) resembled one another.

<center>Participant "I"</center>

Participant "I" was a black woman, aged approximately 45-53 years old. She is a self-employed professionally, who worked for the previous 20 years in the banking industry. She raised three daughters in Conway, allowing them to walk or ride their bikes to school on occasion. She expressed she's never taken a Lynx bus, nor really any other form of public transportation other than a few trips outside the area by commercial airline. Her opinion of the safety of the Conway area was that it was safe for drivers, but only somewhat safe for pedestrians and bicyclists. She has infrequently walked her neighborhood, as she considers walking "one of the better forms of exercise", though admittedly, those times are typically "just after the New Year and school reunions".

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Though she works from the house on a regular basis, she nonetheless has errands to run during the day. Because time is of the essence to her, she feels she needs her car to get things accomplished quickly, so she can return and start working again. As the researcher discussed walking and riding time savings in larger areas, as compared with auto use, she listened, though only because the idea was foreign to her, given her history of living in an area where people don't often commute as such. Following up the conversation, she expressed her pleasure at entertaining the thought, especially as her children were all out of the house (i.e. implying she was now free of providing direct care for younger children, and was hence free to relocate if given the right opportunity.)

Lastly, when asked about the idea of marketing the idea of pedestrian safety as a public service ad, similar to commercial marketing, she felt the idea was sound. It should be noted, her previous vocation in the banking industry pertained to extending small business loans, hence, she seemed to have an educated perspective about such matters.

<center>Participant "J"</center>

Participant "J" was a young (28-year old) Hispanic male, who recently relocated to the area from Puerto Rico after Hurricane Irma last fall. He moved to the area with his entire family, which included his parents, his three siblings, and his boyfriend. Upon moving here, he secured a good-paying job ($45,000/annum) as an instructional designer with a local company. Because he had to leave his car behind in Puerto Rico, he has learned to take Lynx regularly (one of the few participants to do so). He walks to his stop, located nearly ¼ mile from his apartment and rides

one bus for 20 minutes to downtown Orlando, where he catches the Lynx Lymmo circulator service to the stop in front of his employer's building.

He expressed how much he enjoys the area, even as he walks to and from the bus stops. He likes the vitality of the area and the energy of the nightlife. While watching the study video, he said, he "could relate" to that type of place, because that's how he sees Orlando. Of all the participants, he was one of the sole votes for in favor of seeing the events and interactions of the video "taking place in Central Florida". And, of course, his answers to the other jurisdictions ("In Conway? On your street?") were also favorable.

<u>Participant "K"</u>

Participant "K" is a single, white male, aged 24-years old, who works at night in a local jail. He drives a large 4x4 pick-up truck (which he purchased himself) and is well spoken. He lives in an apartment along one of the busier thoroughfares in Conway, but never allowed that to bother him when he jogs for exercise. He moved to the area from out of state, so he still doesn't know too many of his neighbors.

When he was younger, he used to ride his bike "religiously" (i.e. to school, friends' houses, the store, etc.) As was self-described as, "one of those kids people try to run over" – presumably because he took a lot of unnecessary risks. This, perhaps, is why he was a firm believer that pedestrians and bicyclists should have the right-of-way. When shown the video, the recorded playback of his expressions revealed he appeared to be quite happy seeing the actors being able to interact with other travelers, "without having to risk their lives".

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Realizing he is young and mobile, the researcher asked about the community in the video – specifically if he might be amenable to living in such a place, to which he responded, "hell yes!" However, being that he'd recently moved to the area (3 years ago), he's not quite ready to pick up and move again. Nonetheless, the thought did appeal to him, he confessed.

When asked about the idea of helping teach others in the community about travel behavior by showing people exhibiting civil travel behavior in a public service advertisement and showing it repeatedly to gain the greatest impact, he liked the idea. Working in the field of corrections, he sees how people often have their focus in the "wrong direction", so a little "positivity" would certainly help.

<center>Participant "L"</center>

Participant "L" is a married, white male, aged 31-years old, who works in the IT field. Because he telecommutes (i.e. he works from home three days per week and travels to the office two days per week) he estimates he drives considerably less than others who may be interviewed for this study (...though he has no real data to compare). He drives a small eco-friendly vehicle and is well spoken. His family consists of him, his wife of four years, and their two small children (who are younger than school aged). Though he works from home much of the week, he admits he does not get out of the house much for his own recreation, though he walks the dog daily and has begun to take the children with him.

When he was younger he ventured out around the neighborhood on his bicycle and knew most of his neighbors by name. Now, however, with the demands of being a parent, his exposure to the immediate community has diminished (i.e. he said, "they chain me to my computer desk

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during the day", "I get our when the dog or the kids need to escape", and "It occurred to me a new house was built in my neighborhood, which is weird because the house was almost complete before I even knew it was under construction!")

When asked about the effects of the video on him, he prefaced his response with the choice between "whether or not he had (my) kids with (me)". His first comments about the video addressed how "pleasant" the actors were to each other, noting their expressions and their level of communication. When probed to continue, he said this type environment would be ideal for walking with his kids and/or his dog; though he nonetheless expressed reservations about the same. In the same breath, however, he acknowledged he was typically a "nervous parent" - again, given the young age of the children, and anticipated this phase would eventually wear off as his children aged and he relinquished some of his control over them.

When asked about the "power of media", he whole-heartedly agreed that media is powerful. At that point he reminded the researcher of his vocation, which used media to a certain extent, depending on the project. The participant seemed to see such power in a positive light (i.e. he said, "it's a cheap and easy way to get people to learn") and failed to mention any unintentional control language (such as "propaganda").

Participant "M"

Participant "M" is a relatively young (24-year old), unmarried, Asian female who is currently a full-time college student. She has access to an automobile (someone else in her apartment has one) though she takes Lynx ("because it's free for college students") or she catches a ride with her roommate. She expressed that she has taken transit for some time (i.e. during grade

school as well) and so she is a self-proclaimed "expert" on walking around the Conway community. She was quick to discuss several instances when she had close encounters with distracted drivers, or with drivers who "invaded (my) travel space".

As for her impression of the video, she liked the way it was produced and "wished it would be like that here" in Conway. She especially liked the eye contact each actor made with one another, noting many travelers (both pedestrians and motorists) refuse to connect with her. "Some do", she acknowledged. As for its effectiveness, she hinted that broadcasting videos like this over and over, or producing similar videos "might make difference if they (were) done right". Of course, she noted the changing technology (from TV to Internet, for instance) would require producers to adapt as well.

Participant "M" admitted she watched a lot of media (more so than she was initially willing to admit, as she felt guilty because she's a student), both on television and on the Internet. She told how she is exposed to advertisements of "all kinds", and has a few favorites, if only because they are clever. When probed about their effectiveness (i.e. when the researcher asked her if they "influenced her to buy a product or try a service, where she might not have before seeing the clip") she responded that it depended on the particular product. As the conversation continued, however, she reflected that some products or services failed to live up to the "hype" of the ad, which seems to mean the media was persuasive beyond the quality of the product or service. At the conclusion of the conversation, she reflected she was more influenced than she originally thought.

Participant "N"

Participant "N" is an elderly black man (82-years old), who is widowed, with all his six children grown and moved from his home. While he and his wife raised their children in the area in a free-standing house, in a "nice neighborhood", he moved into an apartment after his wife died and his children moved on. Still, he prides himself on his mobility ("I still walk around my apartment complex daily...and walk to the Winn Dixie about every third day to pick up a few groceries"). He says his neighbors all know him (including the children in and around his building) and he knows them, too.

His impression of the video clip was "vivid". He told the researcher he "really liked" the clip, though he noted it lacked "people of color". Still, he acknowledged it was apparently produced somewhere else, where people of color might not be as prevalent. This observation seemed to be important as it pertained to how the actors in the clip communicated with each other, whereas Participant "N" supposed it might be different here in Conway, "where it can still be 'the deep south'".

Participant "N" seemed to be more accepting of the message portrayed by the video, which might be because of his advanced age (i.e. the fact he lived during times when people "didn't doubt their government as much as they do now"). When the participant and the researcher discussed this thread in greater detail, it was revealed he was "greatly affected by Watergate", but remained hopeful such "antics" were an isolated event. Moreover, he was also the target of racial discrimination (i.e. motorists "yelling out the window at me", etc.), but sees the current political awareness as "encouraging", too. As the conversation shifted back to the study video, he said he could "see those (interactions) happening within his apartment complex", because he knows those

people and they know him. When probed to suppose if that might be possible beyond the confines of his small community, he thought for nearly 30 seconds and then thought "perhaps".

Participant "O"

Participant "O" is one of three participants of Hispanic heritage to be included in the study. She is a black woman who proclaimed her age to be "between 75- and 84-years old", though she would not elaborate further. Like Participant "N", she, too, is widowed, with all her eight children grown and moved on. She and her husband raised their children in the Bronx in a townhouse. She remembers it being a "nice neighborhood", but she admitted that the farther one traveled away from her house, the more questionable the community became. She and her husband moved to Florida when they both retired (after the kids all moved out), though they still considered themselves New Yorkers. Shortly after her husband passed on, several of her adult children moved their own families to Florida, where they all live within five miles of each other.

Her mobility has waned over the past several years, subsequent of medical issues. Still, she enjoys being outside her apartment, though she typically stays within the confines of the complex. As she puts it, "the cars on Conway Road make her nervous, so (I) don't walk to the store up the road anymore". She has a number of people who give her rides for her chores: people from her church, her relatives, her neighbors, and Neighborhood Lynx.

Following up a thread that occurred during a previous interview, the researcher asked if she ever experience "racial tension", either here or at her previous residence in New York. She was proud to say she had not, explaining she lived in such a diverse neighborhood in New York that "everyone was different". With that, the conversation shifted back to the video, where she

acknowledged everyone was "white" but the most appealing aspect was they were "nice to one another". When pressed to elaborate, she mentioned how they looked at one another, so one person knew what the other was doing. When asked if she could see that happening here - either in her apartment complex, in Conway, in Central Florida, or simply in the United States; she replied it already happens in her neighborhood and she has "seen it occasionally when (I) go to the store". She pointed out that, because she is simply a passenger when she travels by car, she has time to "look out the window and watch people".

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