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## Communication Theories in Action

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### **Diffusion of Innovations & Cognitive Dissonance in Action**

How does society learn about new products or gain new knowledge about certain topics?

Perhaps a local newspaper, popular news website, or even word of mouth. According to the diffusion of innovations theory, there are various steps involved in transmitting new knowledge and new products throughout society (Baldwin, 2004).

Initial diffusion of innovations research was conducted by various disciplines each examining a distinct innovation. These disciplines included: anthropology, early sociology, rural sociology, education, public health and medical sociology, communication, marketing and management, geography, general sociology, general economics, and other traditions. The results of the studies from each of these disciplines revealed similar findings. Two such findings include: "The definition of innovation followed an S-shaped curve over time and innovators had higher socioeconomic status than later adopters;" (Rogers, 1995, p. 38). As a result of such similar findings, Everett Rogers, founder of the theory, felt that diffusion research was, "Emerging as a single, integrated body of concepts and generalizations;" (Rogers, 1971, p. 38).

Rogers defines diffusion as, "The process by which an innovation is communicated through certain channels over time among the members of a social system;" (Rogers, 1971, p. 5). There are four main elements in the diffusion of innovations, which include: the innovation, communication channels, time, and the social system (Rogers, 1971). An innovation goes beyond physical objects to include ideas and practices that are considered new (Rogers, 1971). A

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communication channel is the way a message travels from one individual to another. The mass media plays an important role in this theory because of its ability to inform audiences about the innovation quickly. The next element of the diffusion of innovations process is time. Much of diffusion research evaluates how quickly an individual adopts or rejects an innovation (Rogers, 1971). The final element of diffusion research is a social system, which is the members working to solve a common goal.

Not all individuals adopt innovations at the same rate. Based on diffusion research, five categories of acceptance were developed. Which category an adopter falls into depends on various factors; however, the primary driving force is the rate of adoption. Innovators tend to be on the leading edge of innovation adoption. These individuals tend to adopt innovations before anyone else, so they, “must be able to cope with a high degree of uncertainty about an innovation at the time of adoption;” (Rogers, 1971, p. 264). Early adopters are well-respected by peers and are often looked to by potential adopters as examples. The early majority is the third group of adopters. Individuals in this category contemplate innovation adoption longer than innovators and early adopters (Rogers, 1971). The late majority typically adopt new ideas out of economic necessity or increased pressure from peers. Individuals in this category tend to adopt new ideas shortly after average members of a system. Finally, the laggards, ~~who, according to Rogers,~~ are the last to adopt an innovation (Rogers, 1971).

The diffusion of innovations theory has often been applied to the ~~agriculture-agricultural~~ industry. ~~In fact~~ The “most influential diffusion study” conducted in 1943 by Bryce Ryan and Neal Gross, studied the diffusion of hybrid seed corn in Iowa (Rogers, 1971). For this paper, I will apply the diffusion of innovations theory to the adoption of swine confinement legislation in

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the United States, which prohibits the use of gestation stalls. Before applying the theory to this example, it is important to gain background knowledge on the subject.

The Humane Society of the ~~U.S.~~United States (HSUS) is one of the most ~~well-known~~well known animal activist groups in the United States. ~~According to their website,~~ HSUS claims to, “~~c~~Campaign for critical reforms in industries that mistreat animals,” and they often target the ~~agriculture~~agricultural industry including, “~~f~~Factory farms that cram breeding pigs into small metal cages,” (The Humane Society of the United States, 2012). For several years, HSUS and other animal activist groups have worked to challenge housing and confinement of farm animals through various ballot initiatives, legislation, and the judicial system (Hochstadt, 2013). Some of their efforts to change confinement requirements have been successful, while several states have managed to defeat activist-backed legislation.

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For years, U.S. swine producers have housed gestating sows in individual stalls, which means individual sows are, “~~h~~Housed in a structure large enough for one sow to stand up and lie down.” (Pork Checkoff, 2013). More recently, some producers have begun using group housing, where groups of five to more than 100 sows are housed in free access stalls (Pork Checkoff, 2013). The use of gestation stalls is one of many practices that animal activist groups do not support. As a result, HSUS and other activist groups have worked to drive efforts to pass legislation in states prohibiting the use of gestation stalls. According to the HSUS website, “~~w~~With the help of HSUS and other animal protection advocates, nine U.S. states – Arizona, California, Colorado, Florida, Maine, Michigan, Ohio, Oregon, and Rhode Island – have passed laws to prohibit the use of gestation crates.” (The Humane Society of the United States, 2012).

To show how the diffusion of innovations applies to states prohibiting the use of gestation stalls on swine operations, it is essential to highlight the four main components of the

theory. As was previously mentioned, the four main components of the diffusions of innovations are the innovation, communication channels, time, and the social system. In this example, the innovation is the elimination of gestation stalls on swine operations and transition to the practice of using group housing. Several communication channels have been utilized by animal rights groups to highlight this innovation, including: television commercials, ~~internet~~ Internet campaigns, radio interviews, billboard signs, and word of mouth. The timeline for this innovation is ongoing. The process began prior to 2002 and will likely continue until all states have eliminated the use of gestation stalls. Finally, the social system. Animal rights group members, lobbyists, and others who believe ~~that~~ the use of gestation stalls is in-humane are the individuals who comprise the social system in this example; individuals who voted in favor of the ballot initiatives are also members of the social system.

The elimination of gestation stalls began in Florida in 2002 and, over the years, eight other states have adopted similar laws; still others have yet to adopt any such type of legislation. Looking at the rate of adoption of such legislation, I believe states will fall into each category: innovators, early adopters, early majority, late adopters, and laggards.

The innovator in the race to eliminate the use of gestation stalls is the state of Florida. As you may recall, innovators adopt the idea, practice or object early on. “The innovator must be able to cope with a high degree of uncertainty about an innovation at the time of adoption.” (Rogers, 1971, p. 264). I view Florida as the innovator in this situation, because prior to 2002, no other state had passed similar confinement legislation. The amendment, which prohibits the confinement of gestating sows that prevents them from turning around freely, was approved by 55 percent of Florida voters. (Hochstadt, 2013). It would be four years until another state would pass similar legislation.

**Commented [LMB10]:** Which is interesting because there are VERY few hogs in Florida, so it was basically a mute point. I personally think HSUS was strategic in this being the first state. The organization knew there wouldn't be much opposition because it didn't affect many people. Then, when it was on the ballot in other states, Florida could be used as an example of a state that had already passed similar legislation.

In 2006, an Arizona ballot initiative banning intensive confinement of gestating pigs by 2013 was approved (Hochstadt, 2013). Then in 2007, Oregon passed a similar bill. Followed by California and Colorado in 2008. Finally, in 2009 Maine and Michigan followed suit by passing similar pieces of legislation. I consider these six states to be early adopters because they all adopted similar pieces of legislation around the same time. Also, their adoption of this type of legislation decreases uncertainty that previously surrounded prohibiting the use of confinement stalls. As these states discuss their adoption of this innovation, other states may be more apt to adopt similar legislation.

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Most recently, in 2012, Rhode Island passed legislation that says any person who confines a sow or calf in a way that prevents the animal from turning around, standing up, lying down or fully extending its limbs is guilty of unlawful confinement (Hochstadt, 2013). I classify Rhode Island as an early majority adopter because of the time lapse between their adoption and the 2009 adoption by Maine and Michigan. I believe the states who had previously adopted this kind of legislation decreased the uncertainty for future states, like Rhode Island, to adopt this kind of legislation. I also believe, that HSUS and other activist groups are working to get similar legislation passed in other states and those states will join Rhode Island as part of the early majority.

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As Rogers points out, diffusion is a process that takes time. In the 11 years since states began adopting legislation prohibiting the use of confinement stalls on swine operations, it is already easy to see the innovators, early adopters, and the beginning of the early majority. However, since only 8 of the 50 states have adopted this type of legislation, the diffusion of this innovation is in the very early stages. I believe more time will reveal additional states that fall

into the early majority category, as well as states that will be considered the late majority and laggards.

Since communication plays a key role in the diffusion of innovations theory, I believe it is important to look at the communication surrounding this issue. In order for legislation to be adopted, the eligible voters in the state must vote in favor of the legislation. That means that backers of the legislation must do a good job of spreading their message. One unique aspect about the diffusion of innovations theory is that it, “cEclaims that messages can have great effects on an audience when spread in the two-step method;” (Baldwin, 2004, p. 323). First, the story is spread by mass media. Next, individuals spread the information to their friends by word-of-mouth, social media, etc. (Baldwin, 2004).

Prior to constituents voting on these issues in an election, HSUS and the other activists groups have a heavy media presence, whether its social media campaigns, television commercials, or interviews with television stations or newspapers. Using powerful imagery and rhetoric, these organizations are the first part of the two-step model. They then rely on people to share their opinions and encourage their friends to support the legislation, which is the second part of the two-step model. I believe the messages spread by these organizations and the subsequent voter response is another tie to the diffusion of innovations theory.

The advertisements and messages HSUS used to persuade voters to support the legislation targeting the confinement practices of livestock producers often contained images and information that caused discomfort for viewers. To explain how organizations utilize images to gain support for their cause, I will explore the cognitive dissonance theory, which was developed by Leon Festinger in 1957.

In his theory of cognitive dissonance, Festinger proposes three basic assumptions about human cognition: “People have a need for cognitive consistency; when cognitive inconsistency exists, people experience psychological discomfort; and psychological discomfort motivates people to resolve the inconsistency and restore cognitive balance;” (Baldwin, 2004, p. 147).

According to the theory, when new information about a person, object or topic is presented that is not in line with what an individual previously believed, the individual may experience psychological discomfort called dissonance. This dissonance is, “Caused by conflict between thoughts, feelings or actions;” (Baldwin, 2004, p. 209). When an individual experiences dissonance, the theory suggests that the inconsistency has to be resolved. When an individual experiences dissonance they try to, consciously and/or subconsciously, restore consonance, which is the, “Existence of consistency between personal beliefs and observations of the world;” (Baldwin, 2004, p. 209).

I grew up actively involved in my family’s farming and ranching operation and continue to play an active role in our operation today. I am familiar with the various aspects of the ~~agriculture~~ agricultural industry including the use of gestation stalls on swine operations. I have had the opportunity to visit swine operations and visit with pork producers about the use of gestation stalls. All the producers ~~that~~ I have visited with use gestation stalls so they can protect the sows from aggressive behavior, which often occurs amongst sows raised in group housing. I also know that pork producers dock the tails of piglets for safety and sanitation reasons. Unfortunately, the average American does not know any of this and animal activist groups, such as HSUS, use this lack of knowledge as a way to portray pork producers in a negative light and highlight their production practices as in-humane.

On Oct. 25, 2012, HSUS published an animated short film called “A Pig’s Tail” (~~hsus~~[HSUS](#), 2012). According to the HSUS YouTube channel, the film has been viewed 26,643 times. This number does not account for the number of times the video was shared on social media or viewed by multiple people at one time, so it is possible ~~that~~ this video has been viewed by more than 26,643 people.

The film depicts the life of sows and their piglets on a factory farm. In particular, the film centers on a piglet named Ginger, who is curious about life before factory farms. Ginger devises a plan for herself and her friends to escape to the old farm. By the end of the film, Ginger sets her friends free and the farmer allows all of the sows to live on the old farm too. During the short film, viewers see crippled hogs in gestation stalls, witness Ginger’s tail being docked, watch as the farmer takes Ginger away from her mother, and observe the farmer using some sort of stick to shock Ginger.

As I explained previously, I am familiar with the practices used on swine operations, so I was not surprised when some of these situations were portrayed in the animation. However, for viewers who have no connection with the industry and who do not understand why the farmer docks Ginger’s tail or takes Ginger away from her mother, I believe this film would raise concern and/or cause them to question the production practices utilized on swine operations. For these reasons, I believe the theory of cognitive dissonance can help explain the thought process of individuals who viewed this short film.

Consumers generally trust where their food comes from and how it is produced. However, with organizations like HSUS spreading messages that do not tell the full story, an increasing number of consumers have begun to question how their food is produced and have

started to eat foods that are produced in non-conventional ways. For example: eating only grass-fed beef, eggs from cage-free hens, or pork from group housed pigs.

To apply the theory of cognitive dissonance to “A Pig’s Tail” I ask you to consider this hypothetical example. Sally is a mother of two young children who tries to feed her family safe, healthy, and affordable food. Although many of her friends have started to purchase organic only products or meat from range-free livestock, Sally trusts the production practices of America’s farmers and ranchers, so she has not implemented the same purchasing habits as her friends. According to the theory of cognitive dissonance, this is Sally’s cognitive consistency. Then let’s assume that one morning while watching cartoons with her children, “A Pig’s Tail” is aired on the television. The short film portrays a farmer who does not care for his pigs, cuts their tails off, takes piglets away from their mothers, and shocks them with a stick. These images and the information included in the film raise a lot of concerns for Sally. Since these go against what Sally believes about how pigs are cared for, she is experiencing a great deal of psychological discomfort. If Sally believes what the commercial says, then she cannot understand how she supported this type of behavior for so long. Sally begins to do a lot of thinking to try to resolve the psychological discomfort she is experiencing.

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Festinger’s theory identifies three ways to reduce dissonance: change present behavior to align with dissonant cognition, justify behavior by changing a cognition to make it less dissonant, or justify the behavior by adding additional cognitions consistent consonant with the behavior, thus supporting it (Baldwin, 2004). Knowing this, Sally has three choices: believe that the information in the cartoon was incorrect and continue to purchase the same kind of pork she always has; purchase only free range pork because the commercial portrayed that as the right way to raise pigs; or stop purchasing pork altogether.

Once Sally makes her decision, she will be able to put her mind at ease and restore cognitive consistency. Although this is a hypothetical example, I believe that this is a good representation of what many Americans experience when they watch “A Pig’s Tail” or other commercials created by animal activist groups.

The diffusion of innovations theory and theory of cognitive dissonance are just two of many theories that apply to these examples of situations in the ~~agriculture~~ agricultural industry. Understanding communication theories is essential for agricultural communicators, so they can better educate the general public about the practices utilized in the agriculture industry.

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