Celebrity vs. influencer endorsements: How commodity organizations can influence consumer behavioral intention change

by

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Abstract

Two important goals of commodity organizations are increasing consumer demand and education. One way to meet these goals is through the use of endorsers, such as celebrities and influencers. Historically, commodity organizations have used celebrities to reach consumers, and recently, organizations have also been engaging in influencer marketing. Research surrounding the use of influencers by the agricultural industry is limited, and no studies have identified the outcomes of using celebrities and influencers in this context. This study sought to determine how endorsement type impacted consumer attitude, if endorsement type impacted consumer intention to purchase a commodity product and visit a commodity organization's website, and if the perceived source credibility was greater for an influencer endorser than a celebrity endorser.

The theoretical framework used to guide this study was Multi-Step Flow Theory, opinion leadership, and Theory of Planned Behavior. Multi-Step Flow Theory explains the flow of communication from media to the public. Opinion leaders, also known as endorsers in this study, serve as a mediator of information in this flow of communication. Theory of Planned Behavior helped explain an individual's behavior and the factors leading to intent to perform a certain behavior.

This study's research questions were addressed using a quantitative between-subjects experimental research design. A Qualtrics questionnaire instrument was distributed to Kansas State University undergraduate students on the Manhattan, Kansas campus. Embedded in the instrument, the manipulation was three mock Instagram posts, in which the independent variable differed by endorsement type (celebrity, influencer, control). The dependent variables were consumer attitude toward the endorsement, behavioral intention to purchase a commodity product, behavioral intention to visit a commodity organization's website, and perceived source

credibility of the endorsement. Individual difference variables measured were demographics; current behaviors related to pork consumption, pork purchasing, and website visiting; social media use; agricultural disposition; endorsement susceptibility; subjective norms related to pork consumption, pork purchasing, and website visiting; and perceived behavioral control related to pork consumption, pork purchasing, and website visiting.

Results of the study revealed there were no statistically significant differences between the celebrity endorsement and the influencer endorsement in attitudes toward the endorsement, behavioral intention to purchase a commodity product, or behavioral intention to visit a commodity organization. There was a statistically significant difference between the perceived source credibility of the control endorsement and the influencer and celebrity endorsement. Future research should include investigating why a non-descript person had a greater perceived source credibility than an influencer and celebrity. This study confirmed research on influencer marketing in food and agriculture should continue to expand to better understand the nuances of the endorser types best suited for meeting commodity organization goals.

Keywords: Influencer marketing, Celebrity endorsement, Multi-Step Flow Theory, Opinion leadership, Theory of Planned Behavior, Commodity organizations, Instagram

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Dedication

This thesis is dedicated to my great grandparents, Carroll and Elizabeth Newingham. Thank you for passing down a love for livestock and deep roots in agriculture. Our time together feels cut short, but I know you were up in heaven guiding me as I overcame hurdles and barriers during my thesis research and in life. Ready...set...draw!

Chapter 1 - Introduction

Overview

U.S. consumers are increasingly disconnected from production agriculture (Schneider, 2009), yet today's consumers are increasingly interested in learning the source of their food and how it is grown or raised (Perry, 2018). To meet consumers' demand for information about their food, agricultural stakeholders have turned to social media to market agricultural products (Shaw et al., 2015). One agricultural stakeholder tasked with this undertaking is commodity organizations (Shaw et al., 2015). Commodity organizations are responsible for the promotion and marketing of commodity products (Forker & Ward, 1993), which are crops and livestock grown for food, fuel, and industrial purposes (DTN, 2021).

One type of commodity product, meat, has a long-standing tradition in the American identity, but younger generations like Generation Z identify less with this identity than their older counterparts (Shahnabdeh, 2022). To maintain demand for commodity products and hopefully increase demand, producers of commodity products pool their resources (Forker & Ward, 1993). In recent years, commodity organizations have used this money to partner with celebrities and influencers as a part of their marketing strategy (Powell, 2022). While research has been conducted on the use of celebrities and influencers as a marketing strategy (Bergkvist & Zhou, 2016; Powell, 2022), it is unknown how the use of celebrities and influencers applies in a food and agricultural context, specifically how such endorsements affect accomplishment of commodity organization goals. As commodity organizations seek to meet their intended goals of increasing demand and consumer education, research is still needed to understand how marketing strategies like partnerships with paid individuals, especially influencers, accomplish these purposes (Powell, 2022).

Background and Setting

At its core, marketing consists of creating, distributing, promoting, and pricing goods and services (Pride & Ferrell, 2019). A combination of these marketing elements helps create a favorable exchange of a good or service between the seller or provider and the receiver. A favorable exchange can result in positive relationships between an organization or business and consumers (Pride & Ferrell, 2019). Therefore, the overall purpose of marketing is to facilitate an exchange so consumers can receive what they view as a benefit to them, and marketers can gain value for their organization by selling the product (Pride & Ferrell, 2019). Additionally, marketers hope the interaction will lead to more transactions between the seller or provider and the customer in future instances, improving the financial performance of an organization or business (Pride & Ferrell, 2019). For these reasons, marketing is centered around meeting the needs of customers within a service or good's target market (Pride & Ferrell, 2019).

Marketing is a complex and dynamic process (Pride & Ferrell, 2019) that has developed significantly since its first origins traced back to the seventh century BCE (Jones & Shaw, 2002). As civilizations advanced, they began to move away from individuals bartering or bargaining for items through trade and toward buying and selling through monetary systems (Jones & Shaw, 2002). Using monetary systems increased efficiency and competition, as observed in marketers raising their prices during times of lower supply (Jones & Shaw, 2002). Raising prices was not present under the previous bargaining style model (Jones & Shaw, 2002). As civilizations developed, marketing thought started to grow as philosophers began having opinions about how societal behaviors had evolved and the shift in marketing systems toward buying and selling rather than bargaining (Jones & Shaw, 2002).

As marketing has evolved so has its scope (Bartels, 1974). Marketing's scope has expanded to include the distribution of products, the economics of distributing products, the management of distributing products, marketing serving as a social process, marketing serving as a societal process, and marketing serving as a function. These changes included a shift in sole emphasis on the economic mechanism of marketing products to marketing as a social behavior that includes techniques for the interaction between buyers and sellers (Bartels, 1974).

The agricultural industry has long been involved in marketing. Historically, farmers and ranchers have marketed their agricultural products to consumers or other producers in a variety of ways (Hibbard, 1922). Farmers and ranchers also participate in advertising, a function of marketing, to let consumers or other target audiences know about their agricultural products and hopefully facilitate the exchange of goods (Hibbard, 1922). Additionally, marketing is relevant to agricultural businesses. One agricultural business that was ahead of its time in terms of using marketing techniques was John Deere (Pulizzi, 2012). John Deere was one of the first businesses to use its magazine to add the marketing practice known as content marketing into their approach. The content in their magazine focused on educating farmers, leading to more business for John Deere (Pulizzi, 2012).

Marshall and Johnston (2022) characterized the evolution of marketing from the pre-industrial revolution to today as four movements. Marketing pre-industrial revolution focused on production and products. The focus then moved to selling, followed by the emergence of the marketing concept. The concept is an approach to marketing in which an organization or business meets the needs of its customers through a set of coordinated marketing activities to meet organizational goals (Pride & Ferrell, 2019). Under the marketing concept, the coordinated effort of marketing activities extends to other branches of an organization beyond the marketing

team (Pride & Ferrell, 2019). With the emergence of the marketing concept came the marketing mix or the 4Ps of marketing, which are product, price, place, and promotion (Marshall & Johnston, 2022). Eventually, post-marketing concept approaches started to take place and are the primary focus of marketing today (Marshall & Johnston, 2022).

Post-marketing concept approaches became necessary as more traditional marketing, modeled after the mass production nature of goods production, became inefficient in meeting changing marketing needs (Meiners et al., 2011). An increasing amount of communication channels and a reduction in media consumption through normal channels by consumers meant advertising was not reaching consumers in the ways it had been previously. Being inundated with advertising as companies fought to get their brand in front of consumers, consumers were losing trust in the credibility of traditional forms of marketing, including tv, magazine, and radio advertisements (Meiners et al., 2011). As consumers turned away from their normal influences like traditional TV, magazine, and radio advertising for purchasing decisions, interpersonal communication took the forefront of decisions made by consumers (Meiners et al., 2011). Friends, family, and people who are perceived as being relatable to consumers started to be more trusted than advertising (Geyser, 2019). This phenomenon led to word-of-mouth marketing (WOMM) gaining popularity out of need in the contemporary marketing realm (Meiners et al., 2011). WOMM has a wide range of definitions, involving multiple sub-types (Geyser, 2019). WOMM can be defined as "the intentional influencing of consumer-to-consumer communications by professional marketing techniques" (Kozinets et al., 2010, p. 71). Other proposed definitions emphasize people promoting products they like in a more natural form (Geyser, 2019). This style of promotion can be done through a variety of channels or mediums (Geyser, 2019). When word-of-mouth promotion is done through a digital format, it is known as

electronic word-of-mouth or eWOM. Babić Rosario et al. (2020) defined eWOM as "consumer-generated, consumption-related communication that employs digital tools and is directed primarily to other consumers" (p. 427). One of the digital tools being employed for eWOM is social media (Babić Rosario et al., 2020).

In the marketing realm, social media predominately serves as a form of eWOM (Appel et al., 2020). The development of Web 2.0 brought a series of social networking or social media platforms (Berthon et al., 2012), which allow marketers more access to consumers and opportunities to engage with them (Appel et al., 2020). In 2005, only 5% of adults in America were using at least one social media platform. Comparatively, in 2021, 72% of U.S. adults use at least one social media platform (Pew Research Center, 2021). Young adults, ages 18 to 29, were the earliest adopters of social media, but even 45% of U.S. citizens over 65 years of age were using social media in 2021 (Pew Research Center, 2021). YouTube was the most widely used platform in 2021 with 81% of U.S. adults saying that they use it (Pew Research Center, 2021). Of the U.S. adult population, 69% use Facebook, 40% use Instagram, 31% use Pinterest, 28% use LinkedIn, 25% use Snapchat, 23% use WhatsApp, 21% use TikTok, 18% use Reddit, and 13% use Nextdoor (Pew Research Center, 2021). U.S. adults frequent social media sites often with seven out of 10 U.S. adults visiting Facebook daily. Six out of 10 U.S. adults visit Snapchat and Instagram daily (Pew Research Center, 2021).

Young adults, ages 18 to 29, are the demographic group with the most Instagram users (Pew Research Center, 2021). Of young adults surveyed, 71% reported using Instagram (Pew Research Center, 2021). Young adults are motivated to use social media to find information and gather inspiration, have social interaction, fill free time, distract themselves from negative emotions, and seek positive emotions to improve their mood (Brailovskaia et al., 2020).

Knowing the preferences and motivations of young adults on social media, marketers can better appeal to this audience, target their campaigns, improve brand awareness, and increase customers (Hruska & Maresova, 2020).

Social media is also important to the agricultural industry as it has multiple functions (White et al., 2014). It is being used by individuals involved in agriculture, sometimes referred to as agriculturalists, for personal and business use (Daigle & Heiss, 2021; Shaw et al., 2015). Social media has allowed agriculturalists to share information about the industry, therefore, increasing agricultural advocacy and transparency between the industry and consumers (White et al., 2014). Like other businesses involved in marketing activities on social media, agricultural businesses can benefit from using social media for promotional efforts, developing relationships with customers, and facilitating sales (Daigle & Heiss, 2021; White et al., 2014;). Promotional efforts and other marketing activities like eWOM help agricultural businesses to reach more people through their preferred method of social media channels which they frequent often (Mattern, n.d.).

Influencer Marketing

One sub-type of WOMM is the growing, but not entirely new, marketing approach known as influencer marketing (Chopra et al., 2020). An influencer plays a role in a consumer's buying decision by being "a person whose views influence other members of the buying center in making the final decision" (Marketing Accountability Standards Board, n.d., para. 1). Activities like influencer marketing can be seen as far back as ancient Rome where gladiators were known to endorse certain products (Suciu, 2020). Around 1760, tea sets were designed and used by royals, elevating the products to those as being deemed for royalty (Suciu, 2020). While

neither of these examples were referred to as influencer marketing at the time, they lead modern researchers to believe that influencer marketing is not a new phenomenon (Suciu, 2020).

The rise in social media and social media influencers (SMIs) paved the way for the expansion of influencer marketing and its benefits to businesses and organizations (Enke & Borchers, 2019). The global influencer marketing industry was valued at $13.8 billion in 2021, an amount double what it was in 2019 (Statista Research Department, 2021). The top platform for influencer marketing is Instagram (Statista Research Department, 2021). The top industries currently using influencer marketing tactics such as SMIs are fashion and beauty, travel, food and beverage, toys, and technology (SocialBook, 2019).

SMIs help organizations reach important, new audiences such as teenagers and young adults (Enke & Borchers, 2019). Organizations have turned to influencers in place of the more traditional celebrity endorsements because influencers allow organizations to reach consumers at a lower price (Appel et al., 2020). Influencer marketing also elicits different responses from consumers than celebrities, including the feeling that influencers are more similar to the ordinary consumer, credible, and trustworthy (Djafarova & Rushworth, 2017; Jin et al., 2019; Schouten et al., 2020). According to 89% of marketers surveyed, the return on investment for influencer marketing is similar if not better than other forms of marketing (Bailis, n.d.). Research conducted by MediaKix, an influencer marketing agency, found 65% of marketing budgets will include an increase for influencer marketing (Bailis, n.d.). The cost of using an influencer can range significantly based on differentiators such as the social media platform, influencer level, content type, influencer demand, and influencer specialization (Geyser, 2022).

While influencers are routinely hired for product endorsement, they have also been a part of starting conversations around relevant topics like social movements (Yang et al., 2021). The

use of influencers for this purpose helps organizations showcase their corporate social responsibility (Yang et al., 2021). Information, inspiration, communication, entertainment, and surveillance were some of the reasons why young adults ages 20 to 25 follow social media influencers (Morton, 2020). One respondent noted that influencers help them stay informed about topics they care about (Morton, 2020). Influencers can help with reducing consumer skepticism of messaging surrounding issues relevant to organizations (Yang et al., 2021).

Influencer Marketing and Commodity Organizations

Agricultural commodities are crops and livestock grown for food, fuel, and industrial purposes (DTN, 2021). Most agricultural commodities fit within the categories of oil seeds, cereal grains, meat: a food source, dairy, other soft commodities, and miscellaneous (DTN, 2021). Commodities are also primarily homogeneous products that are very similar in nature. Because of this, it is hard for consumers to distinguish commodities as unique products (Forker & Ward, 1993). Consumers have an especially hard time with differentiating commodities like wheat that contribute to other products such as bread. Comparatively, consumers do not struggle with the identity of fluid milk because it does not change form from its start to the final product (Forker & Ward, 1993). To increase demand for their commodities, groups of agricultural stakeholders began to compile their resources for promotional activities such as marketing and advertising in the early 1970s (Forker & Ward, 1993). Promotional activities occurring in most agricultural sectors focused on promoting the generic characteristics of the commodity. The primary functions of commodity promotion and advertising are "injecting information into the marketing system, coordination and funding of the information programs among producers with common goals, and addressing product attributes common to the commodity group" (Forker & Ward, 1993, pg. 2). Commodity promotion programs were also an opportunity for commodity

producers to have more autonomy over the promotion and marketing of their products (Forker & Ward, 1993).

The four primary types of groups responsible for commodity promotion and advertising are private brands and joint ventures, trade associations, checkoff programs, and direct government participation (Forker & Ward, 1993). Private firms and joint ventures typically aim their efforts toward marketing a specific form of a commodity. As a result of marketing a specific commodity form, their efforts can potentially increase the overall demand for the commodity. Examples of this are Tropicana, a brand of orange juice, and Jimmy Dean, a brand of sausage. The private brands and joint ventures are primarily responsible for the cost of their promotional efforts. While private brands and joint ventures also expect to see profit returns for themselves from their efforts, their contribution to overall demand helps achieve goals of commodity promotion for the agricultural industry (Forker & Ward, 1993).

The next group responsible for commodity promotion, trade associations, is voluntary. Individuals can decide if they want to participate in promotional efforts on a financial level by being a member of the trade association (Forker & Ward, 1993). Trade associations are non-profit organizations designed to benefit all members (Forker & Ward, 1993; IRS, n.d.). However, since participation is voluntary, trade associations can suffer from "free riders" (Forker & Ward, 1993). Examples of trade associations are the National Cotton Council and the Leather and Hide Council of America (International Trade Administration, n.d.).

As a result of the "free rider" problem in trade associations, commodity checkoff programs were created and participation became required (Forker & Ward, 1993). Checkoff programs, also known as commodity promotion, research, and consumer information programs, were a way to address commodity producers receiving the benefits of promotional activities

without contributing financially (USDA Agricultural Marketing Service, 2020; Forker & Ward, 1993). These programs were established through the 1996 Commodity Promotion, Research, and Information Act. Before this act, individual commodity programs were established in an official capacity through specific commodity legislative acts. Each commodity industry collects funding for its commodity programs in different manners (USDA Agricultural Marketing Service, 2020). Overall, a tax is agreed upon by producers of a commodity and collected (Forker & Ward, 1993). This tax is usually collected for each unit of a commodity (The National Agricultural Law Center, n.d.). Checkoff programs are present at both the national and state level (Forker & Ward, 1993). Examples of checkoff programs are the National Pork Board, American Egg Board, Christmas Tree Promotion Board, and United Sorghum Checkoff Program (Agricultural Marketing Service, n.d.).

The final promotional group type is direct government participation, which can happen at the state and national levels. The federal government has programs for funding international market development. A few examples of these programs are the USDA Foreign Agricultural Service's Market Access Program, Foreign Market Development Program, and the Emerging Markets Program (Foreign Agricultural Service, n.d.). These funds are often used by commodity groups, such as checkoff programs, following strict guidelines. State governments, on the other hand, often use state revenues to promote and increase consumer awareness about their state's agricultural commodities at a domestic and international level (Forker & Ward, 1993). While all four types of groups participate in commodity promotion, the non-profit commodity promotion groups will be the focus for this study. They will be referred to as commodity organizations.

Commodity organizations today often focus their communications and marketing efforts on improving consumers' understanding of agriculture (Hughes et al., 2016). According to the

National Pork Board website, which oversees the Pork Checkoff, the money collected to fund the commodity organization is used for promotion, research, producer education, and consumer education. Under the goal of consumer education, the National Pork Board indicates one action taken is "food editors, chefs, journalists and other food trend influencers in the U.S. receive pork industry information on a regular basis" (Pork Checkoff, n.d., para. 17). Other commodity organizations also reference informing and building consumer demand for their specific commodities in their missions and organizational goals (American Egg Board, n.d.; American Lamb Resource Center, n.d.; Beef Checkoff, n.d.).

One way commodity organizations have tried to meet their consumer education goals is through celebrity endorsements (Powell, 2022). An iconic example of celebrity endorsement by a commodity group was the "got milk?" campaign featuring multiple actors, actresses, athletes, singers, and other celebrities (Huffington Post, 2014). In 2021, the Pork Checkoff conducted a celebrity endorsement campaign with actor, Eric Stonestreet (Pork Checkoff, 2021b). During the campaign, consumers were surveyed to help measure the campaign's success. Of those surveyed, 48 to 54% of consumers viewed the pork industry more favorably after they viewed the campaign materials. Furthermore, 34 to 36% of consumers indicated they were more likely to buy pork (Pork Checkoff, 2021a). One year later, the National Pork Board and Pork Checkoff conducted another celebrity endorsement campaign with county music singer, Luke Bryan (Pork Checkoff, 2022). According to Pork Checkoff, the goal behind this campaign was for Pork Checkoff to partner with a celebrity who has an appreciation for pig farming and can help with sharing the swine industry's story (Pork Checkoff, 2022). The American Egg Board has executed a series of partnerships on social media with celebrities such as the chef, Connie Lovely Jackson, and entertainer, Derek Hough (Markets Insider, 2021; The Incredible Egg, 2021).

Even though the agricultural industry is not designated as one of the top industries using influencers, there is still a potential for the industry to see the benefits other industries are seeing such as reaching new audiences, increasing product demand, and reducing consumer skepticism around organizational messaging (Djafarova & Rushworth, 2017; Enke & Borchers, 2019; Yang et al., 2021). At least four checkoff programs have hired varying levels of influencers (Powell, 2022). Of the influencer levels, mid-impact influencers who have 10,000 to 99,999 followers were reported as being the most used by the four checkoff programs (Powell, 2022). The influencer types that checkoff programs are partnering with most commonly are bloggers and chef/foodies (Powell, 2022).

Problem Statement

Celebrity endorsements have a long-standing history in marketing and marketing literature (Bergkvist & Zhou, 2016). Commodity organizations also have a history with the use of celebrity endorsements such as the "got milk?" campaign started in 1993 and the National Pork Board and Pork Checkoff's campaigns with Eric Stonestreet in 2021 and Luke Bryan in 2022 (Pork Checkoff, 2021b; Pork Checkoff, 2022; Rossen, 2018). A rapidly emerging area in marketing and marketing literature is the use of influencer marketing (Vrontis et al., 2021). In 2017, 87% of marketers were using influencer marketing (Linqia, n.d.). Some commodity organizations have started using influencers in their marketing strategies, but research is still limited on this usage by commodity organizations (The Incredible Egg, 2021.; Powell, 2022). Celebrities and influencers, while they have advantages and disadvantages, do vary in cost (Appel et al., 2020). When selecting an endorsement type, it is important to consider the goals of a commodity organization in combination with the price of the partnership (Yu, 2020). This study sought to provide commodity organizations with a comparison of celebrity endorsements

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and influencer marketing in the context of affecting consumer intentions to meet commodity organizations' goals. Further research is still needed to understand agricultural organizations' partnerships with paid endorsements on social media platforms, especially Instagram (Powell, 2022).

Conceptual Framework Overview

This study was guided by Multi-Step Flow Theory, opinion leadership, and the Theory of Planned Behavior. Multi-Step Flow Theory, and one of its concepts opinion leadership, describe the flow of communication from media to the public and the impact celebrity and influencer endorsers possess. The Theory of Planned Behavior guides an understanding of how attitudes, subjective norms, and perceived behavioral control lead to the intention to act, and the action itself. Together, these tenants created the conceptual framework that directed the variables being studied, the design of the study instrument, and the findings and conclusions.

Multi-Step Flow Theory and Opinion Leadership

For this research, the Multi-Step Flow Theory serves as a foundational understanding of opinion leaders and their role in the flow of communication. Multi-Step Flow Theory posits that there are multiple directions of communication flow between information sources, opinion givers, and opinion receivers (Robinson, 1976). Communication can originate from information sources, such as mass media, and be delivered immediately to opinion receivers, or it can go to opinion givers before being transmitted to opinion receivers (Weimann, 1982). The flow of communication can also be multi-directional such as opinion givers transmitting information to other opinion givers (Weimann, 1982). The concept of opinion givers, more commonly referred to as opinion leaders, was first coined during research under the Two-Step Flow Theory (Lazarsfeld et al., 1968). The concept of opinion leadership has been extended to Multi-Step

Flow Theory (Menzel & Katz, 1955) and has a place in today's research as opinion leaders can serve as channels of information that affect purchasing decisions based on their displayed attitudes toward brands and their products (Chaudry & Irshad, 2013).

Since its origins in early Two-Step Flow Theory research, opinion leadership has expanded to account for societal changes and the digital age (Mutz & Young, 2011). Types of opinion leaders include celebrities (Wood & Herbst, 2007) and social media influencers (Burke, 2017). Opinion leaders are an important component of this study as the foundations of celebrity endorsers and influencers' persuasiveness lie in how opinion leaders transmit information to less involved audiences and deposit influence during the transmission process (Stransberry, 2012; Uzunoğlu & Misci Kip, 2014).

Theory of Planned Behavior

The core function of the Theory of Planned Behavior as a theory and in this study is predicting and explaining the behaviors of humans (Ajzen, 1991). This theory identifies the factors that lead to behavioral intention and in some cases, acting out a specific behavior (Ajzen, 1991). Those factors are perceived behavioral control, subjective norms, and attitudes toward the behavior, each of which have varying importance to behavioral intention depending on individual contexts (Ajzen, 1991). This study measures the factors leading to behavioral intention to determine the level of impact of each factor has on behavioral intention in the specific context of this study.

Behavioral intention to perform specific behaviors was also directly measured through dependent variables. Measuring behavioral intention through the lens of the Theory of Planned Behavior allowed for understanding the endorsement types' (celebrity, influencer, or control)

impact on participants' intention to purchase a commodity product and visit the commodity organization's website.

Need for Study

While organizations in the agricultural industry are beginning to take initiative in the influencer marketing realm, there is a considerable gap in the academic literature regarding influencer marketing in the agricultural industry. It is still unknown if it has the potential for the success and behavioral change cited by other industries. This study will join Neves (2021) and Powell (2022) in developing foundational literature on influencer marketing in the agricultural communications field.

Rosengren and Campbell (2021) proposed research was still needed to understand how individuals consume influencers in industries outside of fashion and beauty. More research is needed across product categories such as food and agricultural products (Vrontis et al., 2021). Currently, examples can be found of both celebrity endorsement and influencer marketing use in the agricultural industry (Markets Insider, 2021; Pork Checkoff, 2021b; Pork Checkoff, 2022; Powell, 2021; The Incredible Egg, 2021). This research will help showcase if celebrity endorsements and influencer marketing are marketing strategies that can influence consumer behavioral intentions to meet commodity organization goals.

Purpose and Research Questions

The purpose of this study was to determine how endorsement type used by a commodity organization impacts consumer attitudes and their perceived source credibility toward the endorsement; and evaluate the impact of endorsement type on consumer intention to purchase a commodity product and visit the commodity organization's website. Three research questions and one hypothesis were investigated during this study:

Research Questions

1. How does the type of endorsement impact consumer attitude toward an endorsement used by commodity organizations?

2. How does the type of endorsement impact consumer intention to purchase a commodity product?

3. How does the type of endorsement impact consumer intention to visit a commodity organization's website?

Hypothesis

1. An influencer endorser will be perceived as being more credible compared to a celebrity endorser.

Assumptions

Several assumptions were made during this study: commodity organizations are using celebrity endorsements and influencer marketing to influence consumer behaviors, Instagram is social media platform commodity organizations use for celebrity endorsements and influencer marketing, consumers are influenced by celebrity endorsements and influencer marketing, and commodity organizations want consumers to visit their websites. Furthermore, it was assumed that participants answered the questionnaire truthfully and carefully.

Limitations

Limitations were present in this study. One limitation was the study was constructed in a controlled setting to collect the desired data. Ideally, the researchers would have conducted the study with the Instagram post being shown on the Instagram platform rather than during the Qualtrics questionnaire. The study is also reliant on what the participants report they will do regarding consumer behavior rather their actual observed behaviors.

Because the sample and population consisted of only Kansas State University undergraduate students, the results are not generalizable. The survey research design creates a limitation on who is included in the sample. Those who do not have the required technology, access to the internet, or adequate internet bandwidth to participate in the survey were not able to be included in the sample.

Definitions of Key Terms

- *Brand* – A name, term, design, symbol or any other feature that identifies one seller's goods or services as distinct from those of other sellers (American Marketing Association, n.d.a., para. 1).
- *Caption* – Text placed with a social media post describing or explaining a picture (Social Bee, n.d.).
- *Celebrity* – A person who enjoys public recognition (Bergkvist & Zhou, 2016).
- *Commodities* – Crops or livestock grown for food, fuel, and industrial purposes (DTN, 2021).
- *Endorsement* – A public statement that someone makes in support of a specific company, product or service. Endorsements can take the form of written or verbal statements, social media posts, website content and audio or video content (Indeed Editorial Team, 2021, para. 2).
    - *Celebrity Endorsement* – An agreement between an individual who enjoys public recognition (a celebrity) and an entity (e.g., a brand) to use the celebrity for the purpose of promoting the entity (Bergkvist & Zhou, 2016, p. 644).
    - *Influencer Endorsement* – An agreement between an individual who exhibits some combination of desirable attributes that allows them to influence a disproportionately large number of others (an influencer) and an entity (e.g., a brand) to use the influencer for the purpose of promoting the entity (Bakshy, 2011; Bergkvist & Zhou, 2016).
- *Influencer* – Individuals who exhibit some combination of desirable attributes – whether personal attributes like credibility, expertise, or enthusiasm, or network attributes such as

connectivity or centrality – that allows them to influence a disproportionately large number of others, possibly indirectly via a cascade of influence (Bakshy, 2011, p. 65).

- *Influencer Marketing* **–** The use of influencers, including celebrities, content creators, customer advocates, and employees, to portray an organization's message to consumers (American Marketing Association, n.d.b).

- *Instagram* – A social media platform for sharing photos and videos with others (Delfino & Antonelli, 2022).

- *Marketing* – The activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (American Marketing Association, 2017, para. 1).

- *Opinion Leader* – Someone whose opinion are highly respected and utilized by the respondents to help in making decisions across a variety of situations such as what types of clothes to wear, where to have major household items repaired, how to discipline children, and whom to vote in political elections" (Cosma & Sheth, 1980, p. 67).

- *Paid Partnership* **–** This occurs when brands pay a content creator or influencer to create social media content about their product or service and post it on the creator's social media (Poletti, 2022).

- *Post* – A message published online on a message board, comment section, or social media network. The message can consist of text, photos, videos, and other graphics (Social Bee, n.d.).

Chapter 2 - Literature Review

Overview

This chapter contains a review of the literature and conceptual framework used to guide this study. The beginning of this chapter is a synopsis of endorsements in advertising and marketing, including a review of two types of endorsements: celebrity endorsements and influencer marketing. Next, the chapter outlines the Two-Step Flow Theory, its development into Multi-Step Flow Theory, and one of its main components, opinion leadership. The next theory reviewed in this chapter is the Theory of Reasoned Action and its development into the Theory of Planned Behavior. Included with the theoretical review are studies contextually related to the current study. The chapter concludes with a summation of the literature, the current gaps in the literature, and how the literature is related to the current study.

Endorsements

An endorsement is "a public statement that someone makes in support of a specific company, product or service. Endorsements can take the form of written or verbal statements, social media posts, website content and audio or video content" (Indeed Editorial Team, 2021, para. 2). Endorsement advertising, also referred to as testimonial advertising, has a history in advertising dating back to as early as the 1880s when endorsers, or testifiers, were featured in advertisements for medicines or medical concoctions that did not require a prescription (Segrave, 2015). Other early examples of endorsements included baking chocolate, baking powder, hair products, pens, soap, and tobacco products (Segrave, 2015). The most prominent early endorsements were for patent medicines, which were ineffective. Because of this, endorsements in advertising lost credibility for approximately 20 years from the early 1900s up to World War I (Segrave, 2015). After World War I, endorsements saw an increase in credibility and a

resurgence with "testifiers and endorsers ranging from the ordinary citizen to the expert to the famous athlete to the film star or other celebrity" (Segrave, 2015, p. 3).

Beginning in the 1920s, celebrities became the most predominant type of endorser (Segrave, 2015). Since then, testimonial advertisements have been found in traditional media including print publications (i.e., magazines and newspapers) and television (Gräve & Bartsch, 2022). With the invention of the internet, endorsement advertising expanded to the web and social media (Gräve & Bartsch, 2022). Endorsements can vary based on their nature (Russell & Rasolofoarison, 2017). A traditional endorsement occurs when a brand and endorser establish a partnership through an advertisement. Another form of endorsement is product placement, where a brand and endorser are connected in a less obvious way through a form of entertainment media such as a product or brand being used during a television show. Real-life display endorsements connect a brand and endorser through practical displays of product or brand use (Russell & Rasolofoarison, 2017).

Just as the endorsement nature can vary, so too can the endorser. In addition to celebrities, other types of endorsers have included experts (Biswas et al., 2006), typical consumers, company presidents or CEOs, animated creatures or objects, employees (Schimmelpfennig, 2018), and influencers (Gräve & Bartsch, 2022). Due to the celebrity endorsements being the most prominent endorser type (Segrave, 2015) and influencer marketing being an emerging strategy used by organizations and businesses (Schouten et al., 2020), these were the two types of endorsements selected for this study. Furthermore, these have been two endorsers of choice for commodity organizations (Powell, 2021). Both celebrities and influencers have been found to exert influence on consumers and how they making their purchasing decisions (Bergkvist & Zhou, 2016; Rosengren & Campbell, 2021).

Celebrity Endorsement

A celebrity endorser is "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement (McCracken, 1989, p. 310)." Often cited in celebrity endorsement research, this definition does not, however, consider how celebrity endorsements are used in other forms of communication beyond advertising. Celebrity endorsements have expanded to other consumer channels, including social media and collaborations between celebrities and brands to create celebrity-branded products (Bergkvist & Zhou, 2016). Furthermore, celebrity endorsements expanded beyond consumer goods to include business-to-business goods and services, consumer services, non-business organizations, and non-profit organizations (Bergkvist & Zhou, 2016). Given these factors, Bergkvist and Zhou (2016) proposed revising the definition of celebrity endorsement to be "an agreement between an individual who enjoys public recognition (a celebrity) and an entity (e.g., a brand) to use the celebrity for the purpose of promoting the entity" (p. 644). Celebrity endorsements have helped businesses and organizations meet marketing and advertising goals of creating brand and product awareness to influence the purchasing decisions of consumers (Erdogan et al., 2001).

Characteristics of Celebrity Endorsements

Since the earliest instances of celebrity endorsement literature, key research areas have emerged to investigate celebrity endorsement prevalence, campaign management, and financial impacts (Bergkvist & Zhou, 2016).

Celebrity Endorsement Prevalence

The use of celebrity endorsements has varied across countries and communication channels (Bergkvist & Zhou, 2016). Asian countries were found to have higher rates of celebrity

endorsement use in television advertisements than the U.S. and Europe. In the U.S., less than 15% of television advertisements contained celebrities compared to 25% in China and 61% in South Korea (Praet, 2008). One of the more recent studies on the prevalence of celebrity endorsements in U.S. magazines found that 10% of all magazine advertisements contained a celebrity (Belch & Belch, 2013).

To determine what types of celebrities were being hired for endorsements in Western countries, a study of German magazines was conducted (Schimmelpfennig, 2018). Of all celebrity endorsements, 64% were from international celebrities, who would be known across the world, and 36% were country-level celebrities, who might only be known by residents of Germany. Often, country-level celebrity endorsements contained an indication of who the celebrity was in the advertisement. In most cases, the celebrities identified in the advertisement were models, minor athletes, musicians, and TV show contestants (Schimmelpfennig, 2018). A 2005 study found 39.6% of celebrities in U.S. endorsements were actors and actresses, 22.6% are athletes, 9.4% are comedians, and 7.5% are music artists (Choi et al., 2005). These findings were similar to those of Belch and Belch (2013), which found 34% of celebrities in U.S. magazine endorsements were actors and actresses, 27% are athletes, 18% are models, and 16% are entertainers.

Celebrity Endorsement Campaign Management

The selection of the right celebrity for a celebrity endorsement campaign can be accomplished following a seven-step model (Erdongan & Dollinger, 2008). The model includes having an account meeting, creating a creative brief, proposing the creative brief, conducting celebrity research, making initial contact with the celebrity, proposing the campaign to the celebrity, and conducting final negotiations with the celebrity. When advertising agencies have

selected celebrities for endorsements, they have focused on matching the celebrity with the target audience, product, and brand, as well as considered the celebrity's overall image (Erdogan et al., 2001). Choi and Rifon (2012) supported this finding when they determined marketing practitioners consider the celebrity's importance to the target audience as the most important factor for celebrity selection.

Celebrity Endorsement Financial Impacts

There is limited literature regarding the financial impacts of using celebrity endorsements (Bergkvist & Zhou, 2016). Athlete endorsements on product sales across the consumer product categories of bottled water, cameras, gum, cosmetics, fragrance, shaving supplies, soft drinks, and phones resulted in a significant increase in sales 43 out of 51 instances (Elberse & Verlaun, 2012). The average increase in sales was 4% (Elberse & Verleun, 2012). Another study conducted on celebrity endorsements with golf players like Tiger Woods also observed an increase in sales with 57% of Nike's investment being returned in U.S. golf ball sales alone (Chung et al., 2013). Nike saw an increase in apparel and equipment sales in the U.S. and worldwide (Chung et al., 2013). Celebrity endorsements have also impacted the value of a business or organization (Bergkvist & Zhou, 2016). The value of a business's share prices increased when endorsements with a business were announced (Agrawal & Kamakura, 1995; Elberse & Verleun, 2012; Farrell et al., 2000). However, some studies have failed to find significant returns from celebrity endorsements in cases other than endorsements by golf players (Fizel et al., 2008) and businesses involved in technology (Ding et al., 2011).

One potential negative result of a celebrity endorsement is when a celebrity is defamed. A negative impact on the stock returns of an organization was observed when the celebrity was found to be guilty of the defamation act. However, guilt in a defamation act did not change sales

(Louie et al., 2001). Another study found a series of factors such as the level of media attention, prominence of the celebrity, and number of endorsers a brand has impacted the reaction of the stock market to defaming act (Bartz et al., 2013). The greater the media attention and celebrity prominence, the more likely a brand's stock value would decrease. If a brand only has one endorser, they were more at risk for decreased stock value from a defaming act (Bartz et al., 2013). In 2009, Tiger Woods was involved in a car accident which led to reputation damaging news reports about his painkiller and sleeping pill use that caused the car crash and his infidelity (Knittel & Stango, 2014). A scandal the magnitude of Tiger Wood's did have a negative financial impact on the businesses who were sponsoring him (Knittel & Stango, 2014).

Celebrity Persuasion

After early research found celebrity endorsements were successful in improving attitudes toward brands, the perceived quality of products, and purchasing intention, research shifted to determine what factors impact the persuasion of celebrity endorsements (Bergkvist & Zhou, 2016). The main factors in celebrity endorsement effectiveness and persuasion are source characteristics, celebrity alignment, celebrity transgressions, and audience-related factors (Bergkvist & Zhou, 2016). Most of the studies on these factors consist of stimuli exposure to a celebrity endorsement with post-stimuli measurement (Berkgvist & Zhou, 2016).

Source Characteristics

Source credibility characteristics of expertise, trustworthiness, and attractiveness can have a significant impact on a consumer's purchase intention (Ohanian, 1991). Celebrity endorsement credibility has been treated as one variable (Lafferty & Goldsmith, 1998; Spry et al., 2011) and as the separate variables of expertise and trustworthiness (Eisend & Langner, 2010; Ohanian, 1991; Rossiter & Smidts, 2012). Source credibility as one variable had a positive

effect on how people view brands (Lafferty & Goldsmith, 1998; Spry et al., 2011). A celebrity's expertise also had a positive effect on a brand (Eisend & Langner, 2010; Ohanian, 1991; Rossiter & Smidts, 2012). Furthermore, perceived expertise increased when the celebrity and brand were correctly aligned (Till & Busler, 2000). Trustworthiness as an independent variable, on the other hand, has not been found to have a positive effect on how a brand is viewed (Bergkvist & Zhou, 2016). This could be a result of consumers knowing celebrity endorsements occur because the celebrity is being paid (Rossiter & Schmidts, 2012). Celebrity attractiveness as a credibility characteristic has yielded conflicting results in studies with most being positive (Eisend & Langner, 2010; Kahle & Homer, 1985; Liu & Brock, 2011; Lord & Putrevu, 2009; Till & Busler, 2000), and a few failing to show a significant impact on purchasing intention (Kamins, 1990; Ohanian, 1991).

One source characteristic that has not been investigated widely in research is celebrity liking, also referred to as people's attitudes toward a celebrity, celebrity likability, and celebrity affect (Bergkvist & Zhou, 2016; Vien et al., 2017). Celebrity likability was found to have a positive influence on purchase intention, but the effect was not as large as those of celebrity credibility and brand credibility. However, the available research does not lend to a strong understanding of this characteristic due to the available studies having mixed results (Bergkvist & Zhou, 2016).

While research has evaluated source credibility in a variety of manners, expertise, trustworthiness, and attractiveness have been found to have an impact on purchasing, endorsement perceptions, and brand perceptions (Ohanian, 1991; Spry et al., 2011). As new source characteristics like celebrity liking emerge and become more researched, a better

understanding of the innerworkings of the source characteristics will be possible (Bergkvist & Zhou, 2016).

Celebrity Alignment

One area of celebrity endorsement effectiveness that has been explored by many researchers is the alignment or fit between a celebrity and the brand or product type they are endorsing (Bergkvist & Zhou, 2016). Celebrity alignment has been researched as the sole variable in the effectiveness of a celebrity endorsement (Choi & Rifon, 2012; Kamins & Gupta, 1994; Kirmani & Shiv, 1998) and as a variable that influences other variables (Misra & Beatty, 1990; Till et al., 2008; Rice et al., 2012; Kamins & Gupta, 1994; Lynch & Schuler, 1994; Till & Busler, 2000). Celebrity alignment has a positive impact on attitudes toward an advertisement (Choi & Rifon, 2012) and celebrity liking (Misra & Beatty, 1990). Alignment between a celebrity and the brand they are endorsing lessens the negative effects, in some cases, of a celebrity having multiple endorsements (Rice et al., 2012). Practitioners should choose a celebrity carefully to align with their brand for greater success and maintained brand credibility (Dwivedi et al., 2015).

Celebrity Transgressions

The behavior of a celebrity has impacted the organizations they endorse and have relationships with (Bergkvist & Zhou, 2016). Misbehaviors or transgressions of a celebrity have decreased favorable attitudes toward the organizations they endorse (Bailey, 2007; Edwards & La Ferle, 2009; Fong & Wyer, 2012; Till & Shimp, 1998; Um, 2013; White et al., 2009). Not all celebrity transgressions have led to negative impacts on associated organizations. When other factors are blamed for the celebrity transgression rather than the celebrity themselves, the negative effects of the transgression are lessened (Louie & Obermiller, 2002; Um, 2013). If the

transgression was perceived as being a result of celebrity incompetency, an organization was less impacted than if the celebrity was considered immoral (Votolato & Unnava, 2006). Lessened effects can also occur when celebrities handle the crisis by admitting guilt rather than denying it (Carrillat et al., 2013).

The severity of a transgression can also be a mediator in the effects of a celebrity transgression. The more severe the transgression, the more negative consumer attitudes become toward a celebrity and the brands they endorse (Wang & Kim, 2019). Transgression severity is also negatively correlated with purchase intention. In the cases of lower-severity transgressions, consumers will use reasoning strategies to internally justify the actions of the celebrity (Wang & Kim, 2019). The potential negative effects for a brand after a celebrity transgression are lessened when consumers consider themselves highly similar to the celebrity or if they are highly committed to the brand and organization (Um, 2013).

Audience-related Factors

Audience-related factors such as location, age, and gender impact how audiences respond to endorsements they are exposed to (Atkin & Block, 1983; Bush et al., 2004; Schimmelpfenning, 2018). Some literature suggests celebrity endorsements are more effective in the U.S. than in most other countries (Amos et al., 2008; Schimmelpfennig, 2018; Silvera & Austad, 2004). Few studies have explored the differences in responses to celebrity endorsements based on age groups (Bergkvist & Zhou, 2016). Of the available studies, one found celebrity endorsements were more effective for individuals ages 13 to 17 than those who were older (Atkin & Block, 1983). Other studies have not observed the same impact of audience age on celebrity endorsement outcomes (Freiden, 1984; Ohanian, 1991).

Another audience-related factor of celebrity endorsement effectiveness is the gender of audience members. Teenage females were more likely to engage in positive word-of-mouth promotion of a product or brand because it was recommended by an athlete they consider a role model than teenage males (Bush et al., 2004). On the other hand, males in China had a larger increase in their purchase intentions because of a female celebrity endorsement than their female counterparts (Liu & Brock, 2011). Another study found females preferred female celebrity endorsers over male celebrity endorsers while males did not have a significant difference in preference for the gender of a celebrity endorser. Therefore, the researchers recommended selecting a female celebrity when trying to target a female audience (Klaus & Bailey, 2008). Gender can also have a significant effect on the attitudes a person has about celebrity-endorsed advertisements, including whether they get a person's attention and are persuasive (Abhishek & Sahay, 2016). While both genders find celebrity-endorsed advertisements entertaining, informational, and better than non-celebrity advertisements, women are more likely to be impacted by a celebrity endorsement because they view them as more persuasive (Abhishek & Sahay, 2016). Confirmed by multiple studies, female endorsers have served as the best endorser type when trying to reach an audience of multiple genders (Klaus & Bailey, 2008).

Researchers in celebrity endorsements have determined key factors making a celebrity endorsement more persuasive. In regard to celebrity endorsement source characteristics, perceived source credibility has had three confines of importance emerge: expertise, trustworthiness, and attractiveness (Eisend & Langner, 2010; Ohanian, 1991). Higher perceived source credibility leads to greater consumer purchasing intention and perceptions of a brand (Ohanian, 1991; Spry et al., 2011). Regarding celebrity endorsement alignment, the fit between a celebrity and the brand or product type they are endorsing increased positive attitudes toward an

endorsement (Choi & Rifon, 2012) and mediated other variables like multiple endorsements (Rice et al., 2012). Regarding celebrity transgressions, celebrities who will potentially commit a transgression should be avoided by organizations due to the potential negative attitudes toward a brand that could occur (Wang & Kim, 2019). However, the severity of the transgression and how the celebrity handles the transgression can lessen the negative attitude impact on a brand (Wang & Kim, 2019; Carrillat et al., 2013). Regarding audience-related factors, little is known about how different age groups respond to celebrity endorsements (Bergkvist & Zhou, 2016), females are the best gender of endorser when trying to reach a wide audience (Klaus & Bailey, 2008), and in a few cases celebrity endorsements were more effective in the U.S. than other countries (Schimmelpfennig, 2018).

Influencer Marketing

An influencer is an individual with desirable attributes that allow them to influence a disproportionately large number of others (Bakshy, 2011). Influencers can be celebrities, content creators, customer advocates, and employees (American Marketing Association, n.d.b). Influencer marketing differs from traditional marketing by using influencers to share information about an organization's brand and key messaging to consumers in place of an organization directly marketing to consumers (American Marketing Association, n.d.b). In this approach, influencers serve as a medium for marketing efforts (American Marketing Association, n.d.b). Influencers help organizations connect and develop relationships with their customers (Chopra et al., 2020). Often, products are placed with influencers or online creators who then endorse the product on their social media platforms (Statista Research Department, 2022). Influencers help brands and organizations connect with younger audiences such as teenagers and young adults (Enke & Borchers, 2019).

Characteristics of Influencer Marketing

Influencer Size

Influencers have been categorized based on the number of their followers into five different levels which are nano, micro, mid-tier, macro and mega influencers (IZEA, 2020). The smallest size influencer level is nano-influencers with 1,000 to 10,000 followers. Even though nano-influencers do not have as large of a following as the other influencer levels, they have tended to have higher engagement rates and closer relationships with their followers. These influencers can also be considered niche influencers. They are more likely to accept products or services in place of monetary payment for influencer-generated content (IZEA, 2020). Micro-influencers have 10,000 to 50,000 followers. Micro-influencers often have more experience than nano-influencers working with brands and creating quality content. This level of influencer has been known to partner more with brands they like, and this translates to more trust from their audiences (IZEA, 2020). Mid-tier influencers have 50,000 to 500,000 followers. This group is more likely to rely solely on being an influencer for their income. Mid-tier influencers tend to have a broader audience than the lower levels. These influencers have proven success with working to promote brands through high quality content that is authentic (IZEA, 2020). Macro-influencers have 500,000 to 1 million followers. Macro-influencers are considered creators who have developed their following or celebrities and popular figures. This influencer level has the highest return on investment for organizations. Macro-influencers are not able to maintain the same relationships with their followers as the lower levels, but make up for it in their overall reach abilities. These influencers will sometimes employ other people to help them with the content creation process (IZEA, 2020). Mega-influencers, the highest level of influencers, have more than one million followers. These influencers are considered celebrities (IZEA, 2020).

They offer brands the opportunity for the widest reach but tend to lose the authenticity of non-celebrity influencers. Mega-influencers' exposure potential also comes with the highest cost (IZEA, 2020).

As follower count increases, so does favorable attitudes toward an influencer because higher follower counts are associated with popularity (De Veirman et al., 2017). However, likeability toward an influencer has been found to decrease if the ratio between followers and followees does not match (De Veirman et al., 2017).

Influencer Type

Within each size level, there are four types of influencers: snoopers, informers, entertainers, and infotainers (Gross & Wangenheim, 2018). Snoopers started creating content on social media platforms and developed themselves into an influencer because they enjoyed doing it as a form of self-expression and developing a social network with others. Informers are those who provide educational content based on their expertise on certain topics. Entertainers meet the needs of their audience by providing them with content that is amusing and enjoyable. Infotainers are a combination type of informers and entertainers. These influencers seek to inform in an entertaining way (Gross & Wangenheim, 2018). Influencers can also vary in their niche specialties. One specialty, known as a beauty influencer, is followed by approximately 43% of consumers (Santora, 2022).

Influencer vs. Brand Account

Content generated through an influencer partnership by the influencer can be promoted and posted by both a brand and the influencer on their respective social media accounts (Lou et al., 2019). In a comparison study, influencer-promoted advertisements, posted on an influencer's account, had higher engagement rates in the form of increased likes and comments than the same

advertisement posted on a brand's social media account (Lou et al., 2019). Consumers also displayed more positive sentiment in the comments of influencer-promoted advertisements than brand-promoted advertisements (Lou et al., 2019). However, when a person is included in an influencer marketing Instagram post on an organization's account, parasocial interaction and trustworthiness are still initiated (Jin et al., 2021).

Influencer Persuasion

Influencer marketing persuasiveness has been a popular area of influencer marketing research. Research on influencer marketing has highlighted how source characteristics, influencer alignment, parasocial interaction, influencer generated content, and advertising disclosure and recognition impact the persuasion ability of influencers (Vrontis et al., 2021).

Source Characteristics

The most common research area in influencer marketing has been source characteristics and how they impact influencer marketing effectiveness (Vrontis et al., 2021). Source characteristics such as how individuals view influencers in terms of attractiveness, authenticity, credibility, and trustworthiness have been found to impact how influencers are received (Rosengren & Campbell, 2021). Trustworthiness, attractiveness, and perceived similarity led to more trust in influencer endorsement posts (Lou & Yuan, 2019).

Source credibility influences how persuasive an individual perceives a source to be (Metzger et al., 2003). It has been studied as an individual source characteristic factor and one that is made up of multiple source characteristics (Hovland et al., 1953; Munnukka, 2016; Rosengren & Campbell, 2021). Source credibility was proposed to be primarily made up of a source's expertise and trustworthiness (Hovland et al., 1953). Another study proposed source credibility was made up of four dimensions: trustworthiness, expertise, similarity, and

attractiveness (Munnukka et al., 2016). When exploring source credibility in YouTube influencers, expertise, trustworthiness, and homophily of source credibility were significant to how participants evaluated the credibility of the influencer materials (Xiao et al., 2018). Source credibility also influences other factors of influencer effectiveness, including parasocial relationships between influencers and their followers (Yuan & Lou, 2020).

When evaluating measurable outcomes that could indicate perceived source credibility, a study of travel influencers found engagement, indicated by post likes, signaled the attractiveness of travel influencers, whereas follower counts signaled perceived expertise (Jang et al., 2020). Another study found the influencer source characteristic of familiarity corresponded with more followers but lower engagement comparatively to likeability which corresponded with fewer followers but higher engagement (Myer, 2021).

Influencer Alignment

When an influencer endorses a product, a connection between the influencer and the product is needed to be effective (Rosengren & Campbell, 2021). People are in tune with the difference between endorsements and recommendations that genuinely come from influencers, and those that do not. Increased effectiveness has been observed when brand relationships are sincere (Chopra et al., 2020). An influencer and a brand or product has been deemed as well aligned and a sincere relationship when the influencer had characteristics highly related to the brand or product, creating a significant association between the two (Kim & Kim, 2021). If an influencer endorsement was well aligned with a product, the influencer led to improved attitudes toward the product because it was perceived as a personal recommendation (Kim & Kim, 2021). Similarly, another study saw more positive consumer attitudes toward an endorsement as a result of well alignment, even when the consumer personally liked the product type less than other

product types (Janssen et al., 2022). Participants viewed the better influencer and product fit as more credible, had a more positive attitude toward the advertisement, and had a higher purchase intention (Janssen et al., 2022).

Parasocial Interaction

Influencers have impacted consumers through psychological processes (Vrontis et al., 2021). An emotional bond can be created between an influencer and their followers because influencers satisfy needs for ideality, providing inspiration; relatedness, displaying similarity and enjoyability; and competence, developing educational content (Ki et al., 2020). Psychological processes including an individual's desire to be like an influencer and parasocial interaction have impacted the continued following of and interaction with an influencer by an individual (Hu et al., 2020). Parasocial interaction has been determined to be the illusionary relationship and emotional connection audiences develop with fictional or real characters in media, specifically social media in the case of social media influencers (Jin et al., 2021). Even in cases where content is posted from a brand's social media account, posts with humans made consumers initiate parasocial interaction (Jin et al., 2021). Research on parasocial relationships in influencer contexts has identified expertise and trustworthiness as two important contributing factors to the level of parasocial relationship an individual has with an influencer (Lou & Kim, 2019).

Influencer-generated Content

Influencer-generated content, created by influencers, has connected audiences with new brands (Lou & Yuan, 2019). Influencer-generated content is an area of influencer marketing that has been explored by multiple disciplines (Chen & Chua, 2020). Social media influencers have used a variety of marketing strategies to make their content more persuasive (Chen & Chua, 2020). The content that influencers have created has impacted their popularity because content

quality affected the emotional attachment audiences have to influencers and their willingness to follow the influencer or recommend the influencer to others (Zhang & Choi, 2022). Furthermore, the understandability of the content was the most significant contributor for determining the emotional attachment of audiences (Zhang & Choi, 2022). Entertainment value has also been identified as a component of influencer-generated content, impacting parasocial relationship development between audiences and influencers (Lou & Kim, 2019).

In a study of beauty and fashion influencers, 21 post types were established based on topic (relationship, advice, expertise-oriented) by photo (caption, fashion, food, friends, pet, scene, selfie). Of the 21 post types, the top three most common influencer-generated post types were relationship-oriented with a selfie, expertise-oriented with a selfie, and videos with a selfie (Feng et al., 2021). The post types that received the most likes were expertise-oriented with a selfie and expertise-oriented with friends (Feng et al., 2021). In terms of post types brands sponsor the most often, expertise-oriented with a selfie and video-oriented with a selfie were most common (Feng et al., 2021).

Advertising Disclosure and Recognition

The Federal Trade Commission (FTC) mandates how influencers must disclose when they have a relationship with a brand. This relationship with a brand can be personal or financial, resulting in an influencer receiving compensation in the form of monetary payment or gifted or discounted products and services (FTC, 2019). Based on the FTC's guidelines, advertising disclosures should be in the endorsement message where it is easy to see and understand (FTC, 2019). Concerns have been raised about whether the FTC guidelines are clear enough to cover the different types of influencer endorsements (Pfeuffer & Huh, 2021). A study on the impacts of varying levels of sponsorship disclosure for product reviews found significantly reduced trust in

the product reviewer and consumers' attitudes toward the review for all levels of disclosure (Pfeuffer & Huh, 2021). The level of disclosure did not, however, impact the amount of reduced trust and resulting attitudes a consumer had (Pfeuffer & Huh, 2021). Two advertising disclosure types: brand influence disclosure, a disclosure of the influence a brand has on the post an influencer makes, and compensation type disclosure, a disclosure of the compensation an influencer is receiving for the post an influencer makes, have been evaluated in previous research (Xie & Feng, 2022). Combining the two advertising disclosure types led to increased influencer credibility and attractiveness when an influencer disclosed they received the product as a gift and were influenced by the brand to give a predetermined review (Xie & Feng, 2022). The disclosure of receiving payment for a review and being influenced by the brand to give a predetermined review did not yield the same positive results in terms of source credibility (Xie & Feng, 2022). An analysis of clothing brand influencer posts found the level of advertising disclosure did not significantly impact consumer engagement as a whole on the post (Lou et al., 2019). Likes on a post were not lower when a post contained an advertising disclosure by beauty and fashion influencers (Lou et al., 2019). Another study found when the advertising disclosure was placed in a post it did result in slightly reduced engagement rates (Karagür et al., 2022).

Another component researchers have focused on surrounding advertising disclosure is advertising recognition, where a consumer is aware the message presented is a form of advertisement (Evans et al., 2017). Advertising disclosure has been found to increase advertising recognition (Evans et al., Kim & Kim, 2021). In a college student population, advertising recognition especially occurred when the language included used "Paid Ad" (Evans et al., 2017). The alignment between an influencer and a brand has decreased a consumer's advertising recognition ability (De Cicco et al., 2021; Kim & Kim, 2021). One explanation for this has been

consumers believe an influencer has a genuine appreciation for a product when it aligns well with the influencer (Kim & Kim, 2021).

Celebrity Endorsement vs. Influencer Marketing

Only a few studies have investigated the difference between celebrity endorsements and influencer endorsements (Vrontis et al., 2021). Of the available studies, non-celebrity influencers were perceived as more relatable than a celebrity (De Veirman et al., 2017; Djafarova & Rushworth, 2017; Morton, 2020). Influencers possessed a stronger influence over consumer purchasing behaviors and attitudes towards endorsed brands due to better received source characteristics and higher levels of social presence (Djafarova & Rushworth, 2017; Jin et al., 2019; Schouten et al., 2020). The source characteristics with a stronger influence for influencers than celebrities were perceived credibility, trustworthiness, and similarity (Djafarova & Rushworth, 2017; Jin et al., 2019; Schouten et al., 2020). Influencers and their stronger source characteristics and social presence could result in higher levels of envy from consumers than in the case of celebrities (Jin et al., 2019). Instagram influencers were perceived by consumers as more trustworthy than traditional celebrities (Jin et al., 2019). While the alignment between an endorser and a brand has been found to be important in celebrity endorsements, the alignment between an influencer and a brand was found to be potentially more important than the alignment between a celebrity and a brand (Schouten et al., 2020).

Role of Social Media in Celebrity Endorsements and Influencer Marketing

As social media has garnered popularity with the public, celebrities have also joined social media to connect with their fans and promote what they are involved in (Chung & Cho, 2017). Social media has also given organizations the opportunity for higher returns from social media endorsements than those from traditional endorsements on television or in magazines

(Kapitan & Silvera, 2016). One social media platform celebrity endorsements have become

present on is Instagram because of its emphasis on visuals rather than text (Gupta & Nair, 2021).

Instagram is also an important platform for social media influencers. While influencers

are present on a variety of social media platforms such as Facebook, YouTube, Twitter, TikTok

and others, Instagram is the top platform for influencer marketing (Statista Research Department,

2021). Instagram has been ideal for influencer marketing due to its visual nature, high

engagement, and prevalence for younger audiences (Lin et al., 2019). Furthermore, those looking

to implement influencer marketing on social media have suggested the e-commerce capabilities

of Instagram make it an attractive platform to use (Santiago & Castelo, 2020). When influencer

content is created, organizations can be tagged for easy access to the organization's profile,

features that allow viewers to swipe up and access an external link can be added, and a "buy"

button can be placed on the post (Santiago & Castelo, 2020).

Role of Celebrity Endorsements and Influencer Marketing in Food and Agriculture

Celebrity endorsements have been used in the food and beverage industries to market

products (Zhou et al., 2020). One study evaluated the use of celebrity endorsements for food and

beverage products from 1990 to 2017 (Zhou et al., 2019). The results found a total of 542

celebrities were represented in 732 endorsements of 120 products or brands during the 27-year

period (Zhou et al., 2019). The top product types using celebrity endorsements were dairy

products and brands, fruits and vegetables products and brands, and sugar-sweetened beverage

products and brands (Zhou et al., 2019). Food and beverage celebrity endorsements have been

found on or at TV and print media; company and third-party websites; digital, social media, and

mobile devices; grocery stores, and sports, and music settings (Zhou et al., 2020). Because many

celebrity-endorsed products have been highly processed foods and beverages (Zhou et al., 2019;

Zhou et al., 2020), a negative image has been fostered due to these products having led to increased obesity, especially in children (Bragg et al., 2016).

Like with celebrity endorsements, one of the main focuses of influencer marketing research within the context of the food industry has been its impact on children (Coates et al., 2019; Coates et al., 2020; De Veirman et al., 2019). Influencer marketing has been effective in increasing the consumption of food products with low nutritional value (De Jans et al., 2021). De Jans et al. (2021) conducted a study to determine what characteristics of influencer marketing would lead to children selecting a more nutritional snack choice. They found influencers portraying a non-active lifestyle compared to an active lifestyle had a significant direct effect on snack selection. Children exposed to an influencer with a non-active lifestyle chose the snack with high nutritional value more often (De Jans et al., 2021).

Limited research is available on the role of celebrity endorsements in agricultural contexts (Bannor & Aryee, 2022) with most related studies being conducted on populations outside of the U.S. One such study was conducted in China on livestream shopping by consumers of agricultural products (Yu & Zhang, 2022). For this study, the perceived endorsements (from larger scale celebrities with countrywide recognition to more local celebrities) of the products had a significant positive effect on attitudes, which led to increased purchasing intentions for the agricultural products on livestream shopping (Yu & Zhang, 2022).

Few studies have evaluated the use of influencer marketing in agriculture (Neves, 2021; Powell, 2022). Neves (2021) conducted a content analysis on dairy influencer accounts during COVID-19 with the findings showing that influencers can serve as a tool in crisis communications. Neves (2021) also interviewed dairy influencers on Instagram to determine how they approached posting about the dairy industry during COVID-19. The interviewed dairy

influencers indicated they used crisis communication strategies when posting information and were motivated to post based on their desire to benefit stakeholders and educate (Neves, 2021). Powell (2022) determined the demographics of Instagram influencers partnering with checkoff programs. Most influencers being used by the four studied commodity checkoff programs (beef, egg, pork, and milk) were categorized as mid-impact influencers with 10,000 to 99,999 followers (Powell, 2022). Overall, the most common influencer types for the four commodity checkoff programs were blogger and chef/foodie (Powell, 2022). For Pork Checkoff, the most common influencer type partnered with was chef/foodie (Powell, 2022). Gallery and photo post types were also the most common influencer post types for the four commodity checkoff programs (Powell, 2022).

Celebrity endorsements and influencer marketing have both had a place in academic literature. Celebrity endorsements are characterized by their prevalence in marketing, how campaigns are managed, and their financial impacts for organizations (Bergkvist & Zhou, 2016). Research has also explored key factors which increase consumer attitudes toward a brand and purchasing intention. These factors can be source characteristics (Ohanian, 1991; Spry et al., 2011), celebrity alignment (Choi & Rifon, 2012), and audience-related factors such as location, age, and gender (Amos et al., 2008; Atkin & Block, 1983; Liu & Brock, 2011). On the other hand, influencer marketing is often characterized by the size of the influencer (IZEA, 2020), types of influencers such snoopers, informers, entertainers, and infotainers (Gross & Wangenheim, 2018), and whether the influencer-generated content is posted on the social media account of an influencer or a brand (Lou et al., 2019). Like celebrity endorsements, influencer marketing can lead to increased purchase intentions and attitudes of a product (Janssen et al., 2022). Factors of influencer marketing in accomplishing these objectives are source

characteristics (Rosengren & Campbell, 2021), influencer alignment with a product and brand (Kim & Kim, 2021), parasocial interaction (Lou & Kim, 2019), and advertising disclosure and recognition (Pfueffer & Huh, 2021). Even though multiple studies have explored celebrity endorsement and influencer marketing separately, few have investigated the differences between the two (Vrontis, 2021). Influencers have been found to possess stronger influence on purchasing behaviors and attitudes toward endorsed brands (Djafarova & Rushworth, 2017; Jin et al., 2019; Schouten et al., 2020). While celebrity endorsements and influencer marketing have been used in the agricultural industry (Powell, 2022), studies have only evaluated one of the strategies. The available studies on influencer marketing are both exploratory in nature and do not evaluate the effectiveness of influencer marketing in agriculture. There is a need to add to the literature surounding the use of celebrity endorsements and influencer marketing in food and agriculture.

Conceptual Framework

This study was guided by Multi-Step Flow Theory, opinion leadership, and the Theory of Planned Behavior. Multi-Step Flow Theory, derived from Two-Step Flow Theory, explained the flow of communication that occurs on social media such as the sharing of opinions on products, services, issues, etc. to less involved audiences (Burke, 2017). Opinion leadership served as a foundation for celebrities and influencers and their role in the transfer of information from media to less involved audiences (Burke, 2017). Theory of Planned Behavior, derived from the Theory of Reasoned Action, helped guide the relationship between attitudes and behavioral intention (Ajzen, 1991). Furthermore, Theory of Planned Behavior emphasized how attitudes and behavioral intention play a role in predicting continued behavioral decision outcomes as a result of the endorsements of celebrities and influencers (Rahmen et al., 2021).

Multi-Step Flow Theory

One area of communication research has concentrated on is the flow of influence and information (Weimann, 1982). Research on the flow of information from the media to the public has highlighted the presence of channels which information and influence is disseminated through (Weimann, 1982). This area of communication has been studied by many communications researchers who have contributed to the development of the Two-Step Flow Theory and the Multi-Step Flow Theory (Weimann, 1982).

Two-Step Flow Theory

In 1948, Lazarsfeld et al. researched voter decision-making during the 1940 U.S. presidential election. This research was published in the book *The People's Choice: How the Voter Makes Up His Mind in a Presidential Campaign* (Lazarsfeld et al., 1968). Mass media was found to be able to reach the public through opinion leaders who then are responsible for filtering the information they receive from mass media (Lazarsfeld et al., 1968). After filtering the information, opinion leaders were sharing it with those who are less involved with or interested in the specific topic area (Lazarsfeld et al., 1968). This two-step process determined by Lazarsfeld and his fellow researchers would become known as Two-Step Flow Theory shown in Figure 2.1 (Lazarsfeld et al., 1968). The two-step flow process was highly impactful to social theory and communications research as it shifted the image of modern society (Katz, 1957). With opinion leaders serving as an in-between for mass media and consumers this meant mass media was diluted and not automatically reaching all consumers (Katz, 1957).

Figure 2.1. *Two-Step Flow Model*
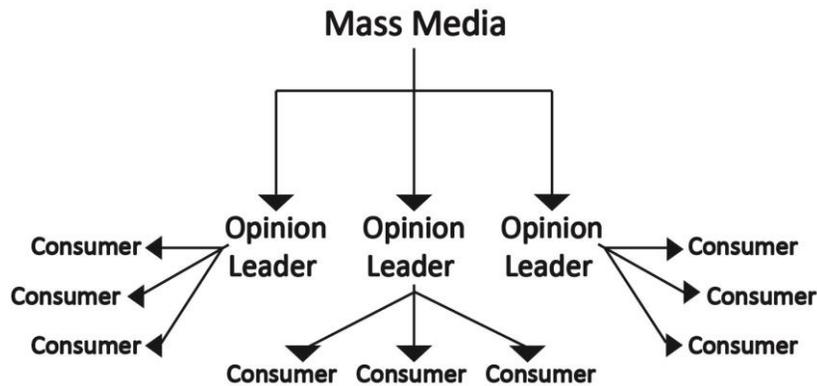
The two-step flow hypothesis presented in *The People's Choice: How the Voter Makes Up His Mind in a Presidential Campaign* had its limitations in evidence and did not account for the importance of interpersonal communications (Katz, 1957). Because of this, researchers sought to provide an empirical data foundation to support and expand the theory (Katz, 1957). Four studies conducted at Columbia University proceeding the 1940 presidential election study later became recognized as the most significant contributors and supporters of the Two-Step Flow Theory (Katz, 1957). These studies were Merton's study of interpersonal influence and communications behavior in Rovere (Merton, 1949), the Decatur study of decision-making in marketing, fashions, movie-going and public affairs (Katz & Lazarsfeld, 1955), the Elmira study of the 1948 election campaign (Berelson et al., 1954), and a study on the diffusion of new drugs among doctors (Coleman et al., 1957).

The first of the influential studies following the 1940 presidential election voter decision-making study was the Rovere study (Katz, 1957). This study took place in a small town in New Jersey around the conclusion of the original study in the form of a pilot-type study. A sample of 86 individuals were interviewed regarding who they sought information from on a variety of topics. The named individuals were them compiled and anyone mentioned at least four times was deemed an opinion leader and interviewed (Katz, 1957). This study helped bridge one of the

initial gaps from the original study by allowing for both those being influenced and the opinion leaders to be a part of the study. Another differentiation from the original 1940 voting study was that this study had a narrower definition of an opinion leader, resulting in the determined opinion leaders having a wider audience (Katz, 1957). Rather than only needing to influence one person, this study looked at individuals influencing at least four people. With the focus primarily being in categorizing the opinion leaders, the researchers from this study did not evaluate how opinion leaders interacted with the original information distributers, also referred to as the mass media. There was also a lack in concentration on the relationship between the opinion leaders and those they influence (Katz, 1957).

The Decatur study was conducted from 1945 to 1946 (Katz, 1957). This study worked to take further steps than the original 1940 voting study. The focus of this study was not only on opinion leaders but also personal influence and those who identified the opinion leader as a leader (Katz, 1957). Rather than first asking those who had been influenced, the study asked the opinion leaders to indicate who they had influenced. Findings from the Decatur study indicated that opinion leaders often were influenced by others as well (Katz, 1957). The researchers also concluded that opinion leadership could not be considered a trait, rather members of certain groups would empower individuals to be opinion leaders at certain times (Katz, 1957). Opinion leaders were often determined based on group structure and values rather than an individual's demographics. (Katz, 1957).

The next significant study under the Two-Step Flow Theory was the drug study conducted by Coleman et al. (1957) looking at how doctors made decisions to adopt new drugs. Because of the available sample, the researchers were able to interview all doctors within four midwestern cities (Katz, 1957). The opportunity to not only track the interpersonal networks

between the doctors and determine who they viewed as opinion leaders but also record how promptly doctors innovated to new drugs allowed for a more comprehensive and objective study (Katz, 1957).

Like the original 1940 voting study, the Elmira study was based on an election, specifically the 1948 election (Katz, 1957). The researchers found many opinion leaders were those who were more educated on each socioeconomic level. Often, conversations pertained to the election were between individuals with similar ages, occupations, and political views (Katz, 1957).

Multi-Step Flow Theory

The research following the two-step flow hypothesis creation revealed there was more to the flow of communication than originally determined. Multiple studies started to raise concerns regarding whether the Two-Step Flow Theory was oversimplified and did not consider direct flow from mass media to consumers (Westley, 1971), different diffusion process stages such as awareness, interest, evaluation, trial and adoption (Rogers, 2003), the potential continuum nature between opinion leaders and those who receive the opinions (Lin, 1971), and the horizontal flow of communication referred to as "opinion sharing" rather than "opinion giving" (Troldahl & Van Dam, 1965), which suggests there are other sources of communication besides mass media and that communication can flow in ways other than strictly vertical (Robinson, 1976).

At the conclusion of a preliminary article for the Coleman et al. (1957) new drug adoption study, Menzel and Katz (1955) proposed potential adaptations to the Two-Step Flow Model into a Multi-Step Flow Model with the recognition there are sources of information other than printed publications, instances where the model might not apply for channels that are easily accessible, and different leadership types beyond opinion leadership such as innovators or

pioneers. According to Weimann (1982), "the idea of multistep flow extends the possible

direction of flow and accounts for the cases of direct flow and longer chains of flow" (p. 765).

The Multi-Step Flow Model also better addressed the relay and feedback process to the flow of

communication, as can be seen in Figure 2.2 (Weimann, 1982).

Figure 2.2. *Multi-Step Flow Model*
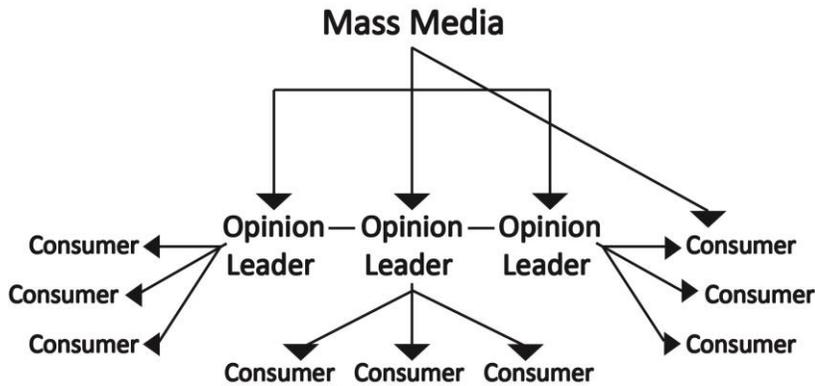
Two-Step and Multi-Step Flow Theory in Food and Agriculture

Two-Step Flow Theory has a history in research in food and agriculture (Deb & Sharma,

1968; Emery & Oeser, 1958; King & Summers, 1970; Lionberger, 1949). One example of how

Two-Step Flow Theory has made its way into food and agriculture research is a study which

tested the diffusion process for a new food product under the two-step flow model (Arndt, 1968).

This study supported the Two-Step Flow Theory but found a horizontal communication flow was

present as suggested by proponents of Multi-Step Flow Theory (Arndt, 1968). The delivery of

agricultural extension information also was found to sometimes follow the Two-Step Flow

Model (Baba et al., 2019).

**Two-Step and Multi-Step Flow Theory in Celebrity Endorsements and Influencer
Marketing**

While Two-Step Flow Theory has been applied in celebrity endorsement research on a

limited basis, it has also been applied to influencer marketing research (Burke, 2017; Uzunoğlu

& Misci Kip, 2014). Two-Step Flow Theory and Multi-Step Flow Theory were applied to online platforms for communication to better understand the effects of social media influencers on how products are perceived (Burke, 2017). A study of the perceived source credibility of Instagram beauty influencers found Two-Step Flow Theory had merit through finding influencers were acting as a modern opinion leader (Zia et al., 2021). In many instances of research applying Two-Step Flow Theory to influencer marketing, the primary theoretical focus is one component of Two-Step Flow Theory, opinion leadership (Uzunoğlu & Misci Kip, 2014).

Opinion Leadership

Opinion leaders are also known as leaders, informal leaders, information leaders, adoption leaders, fashion leaders, consumption leaders, local influential, influential, influencers, sparkplugs, gatekeepers, and tastemakers (Rogers & Cartano, 1962). Lazarsfeld et al. (1948) first coined the term "opinion leader" in research during their 1940 presidential election study as a component of the Two-Step Flow Theory. The team of researchers observed that "in every area and for every public issue there are certain people who are most concerned about the issues as well as most articulate about it" (Lazarsfeld et al., 1948, p. 49). The concept of opinion leaders was further defined by specifying opinion leaders have an influence over others (Berelson et al., 1954). Additionally, Merton (1949) focused on interpersonal influence in his Rovere study and how it impacts the behaviors and attitudes of those who are receiving the influence. Interpersonal communication, the "exchange of information between individuals," and personal influence, "the effect of interpersonal communication on future behavior," are key components of opinion leadership as interpersonal communication influences most individuals' decision-making (King & Summers, 1970, p. 44).

The concept of influence can range in the degree of influence and, therefore, was determined to be a continuous variable (Rogers & Cartano, 1962). As research has developed on opinion leadership, so has the understanding that individuals do not fall into the same category of leader or follower in every instance (Rogers & Cartano, 1962). Two types of opinion leaders, monomorphic and polymorphic, were defined by Merton (1949). Monomorphic opinion leaders are those who are considered an expert in at most a few specific fields whereas polymorphic opinion leaders have influence over others in a variety of topics and areas. Polymorphic opinion leaders are more generalized in their influence than monomorphic (Merton, 1949). To further complicate the inner workings of opinion leaders, Merton (1949) argued that an individual can be both types of opinion leaders depending on the groups of people they are influencing. While some researchers disagreed with this conclusion of Merton's (Emery & Oeser, 1958; Wilkening et al., 1962), most of their studies were done using a small sample (King & Summers, 1970). Contradicting other studies, one study determined the overlap of opinion leadership was greater among similar product categories, but opinion leadership overlap across multiple combinations of categories was also common (King & Summers, 1970).

By the 1980s, opinion leadership research had been categorized into three research confines: specific vs. generalized opinion leaders, the difference between opinion leaders and followers, and opinion leaders' role in the flow of communication (Cosma & Sheth, 1980). Across the categories, the measurement and identification of opinion leaders was a common concern (Cosma & Sheth, 1980). Because research was limited based on earlier definitions of opinion leadership, Cosma and Sheth (1980) proposed the new definition "as someone whose opinions are highly respected and utilized by the respondents to help in making decisions across a variety of situations such as what types of clothes to wear, where to have major household

items repaired, how to discipline children, and whom to vote in political elections" (p. 67). Furthermore, opinion leaders were described as personal contacts of the respondents (Cosma & Sheth, 1980). When using this definition for their study, Cosma & Sheth (1980) found one's culture can impact how a person views who an opinion leader is. Besides culture, other important elements of opinion leadership have been the characteristics of opinion leaders, how opinion leaders affect purchasing decisions, how opinion leaders serve as a channel for information, and how opinion leaders' attitudes toward products and companies are translated to those whom they influence (Chaudhry & Irshad, 2013).

Bennett & Manaheim (2006) argued the role of opinion leadership changed since its origins with the Two-Step Flow Theory because of changing technology like the internet. They proposed opinion leaders were losing their importance in the flow of communication as in-person communication declined and instead, communication was moving to a One-Step Flow model with media and communicators targeting information to target audiences (Bennett & Manaheim, 2006). However, this concern over the elimination of opinion leaders and the extinction of the Two-Step Flow Model has been negated by peer influence and opinion leadership occurring on social media (Mutz & Young, 2011). Developments in the internet have increased the focus of research on opinion leaders who operate on the internet and the personal interaction that occurs through online communities (Uzunoğlu & Misci Kip, 2014). Online communities can be developed through chat rooms, online forums, bulletin boards, and groups on social media (Leal et al., 2014). In these communities, opinion leaders have emerged when individuals are active in the community, have experience with a product or service, are frequently participating and posting contributing information, and are perceived to have a good taste in products and services (Leal et al., 2014). As shown through the example of online

communities, the internet has provided a rise for electronic word-of-mouth (eWOM) (Standing et al., 2016). Businesses have turned to opinion leaders to implement eWOM in the new realm (Bao & Chang, 2018).

A study conducted by Uzunoğlu & Misci Kip (2014) determined individuals are less trusting of the messages coming directly from brands and are more accepting of the opinions of opinion leaders similar to themselves, which were bloggers in the context of the study. Like in Two-Step Flow Theory, messages from brands were being transmitted from the brand to a blogger to those being influenced by the message (Uzunoğlu & Misci Kip, 2014). When applying Two-Step Flow Theory to the digital realm, an opinion leader such as a blogger is a mediator of brand information to audiences. Those who follow an opinion leader might also transmit brand messages to others they know (Uzunoğlu & Misci Kip, 2014).

One type of opinion leader on social media that's effectiveness can be explained by Two-Step Flow Theory and Multi-Step Flow Theory are social media influencers (Burke, 2017). In recent research regarding social media, the term opinion leader has been used interchangeably with the term social media influencer (Casaló et al., 2020). Rather than obtaining information through traditional mass media, individuals have received information from the internet and social media with social media influencers serving as opinion leaders in the transaction (Burke, 2017). Digital opinion leaders are considered product or service mavens who are active participant in online communities like social media (Leal et al., 2014). With the understanding of the Multi-Step Flow Theory, information in the digital age can be received by less active participants from digital opinion leaders and then shared to others by the less active participants (Stransberry, 2012).

Opinion Leadership in Food and Agriculture

Agriculture played a significant role in some of the earliest observations of opinion

leadership (King & Summers, 1970). Low-income farmers in Missouri were found to be more

influenced to use newer farm technology and innovations because of personal influence than

traditional media sources like radio and farm magazines (Lionberger, 1949). In a rural sociology

study of farmers and how they adopt new farm practices, certain individuals in a community

were found to be designated by their community members as being influential and, therefore,

responsible for relaying information from district agricultural officers (Emery & Oeser, 1958).

These agricultural opinion leaders involved in disseminating information about improved

farming technology or practices were classified as informal leaders in early sociology research

(Deb & Sharma, 1968). Informal leaders were contacted for information and advice by farmers

that are not as likely to seek information from other sources. Informal leaders were more capable

of convincing other farmers to adopt technology than others (Deb & Sharma, 1968). These

informal leaders were also found to have higher levels of education, a closer connection with the

local extension, and larger farms with higher incomes (Deb & Sharma, 1968).

Opinion Leadership in Celebrity Endorsements

Celebrities can be viewed as opinion leaders in various situations and one area of

research surrounding opinion leadership has investigated this occurrence (Wood & Herbst,

2007). Celebrity endorsers as opinion leaders has played a role in political elections. The role of

celebrities in the decision-making of first-time voters during the 2004 U.S. presidential election

was investigated (Wood & Herbst, 2007). During this election, celebrities were actively involved

in advertising efforts to get more young people voting and voting for a specific candidate (Wood

& Herbst, 2007). However, respondents in the study indicated that they were more influenced to vote for a candidate by family and partners than celebrities (Wood & Herbst, 2007).

Opinion Leadership in Influencer Marketing

Opinion leadership has been a relevant component of influencer marketing because influencers can function as opinion leaders (Farivar et al., 2021). Opinion leadership in the context of influencer marketing has revolved around the expertise, competence, and leadership perceptions the followers of an influencer possess regarding that influencer (Farivar et al., 2021). Influencers can impact the behaviors of others because of their connection with their audience and overall personal appeal (Torres et al., 2019). Opinion leadership has been evaluated in combination with parasocial relationship to determine how the two impact purchasing intention (Farivar et al. 2021). Both opinion leadership and parasocial relationship had a significant positive relationship with followers' intentions to purchase (Farivar et al., 2021).

Theory of Planned Behavior

Opinion leadership has been used as a conceptual framework alongside the Theory of Planned Behavior to explain its role in behavior (Fu et al., 2015; Howell et al., 2015; Raghupathi & Fogel, 2015). The Theory of Planned Behavior expanded the Theory of Reasoned Action, both of which have explored the relationship between personal attitudes and behaviors (Ajzen, 1991).

Theory of Reasoned Action

Ajzen and Fishbein (1975) determined prior research of attitudes lacked consistency in definition and measurement, resulting in the need for a conceptual definition of attitude. This conceptual definition, Ajzen and Fishbein thought, should include only important characteristics to help make it consistently measurable (Ajzen & Fishbein, 1975). With this need in mind, the two researchers based a conceptual framework on the differences and relationships between

beliefs, attitudes, intentions, and behaviors which would become the Theory of Reasoned Action as shown in Figure 2.3 (Ajzen & Fishbein, 1975). Theory of Reasoned Action also differed from other previously conducted research on attitudes because it looked at attitudes toward performing a behavior rather than general attitudes toward objects (Ajzen & Fishbein, 1975).

Figure 2.3. *Theory of Reasoned Action*
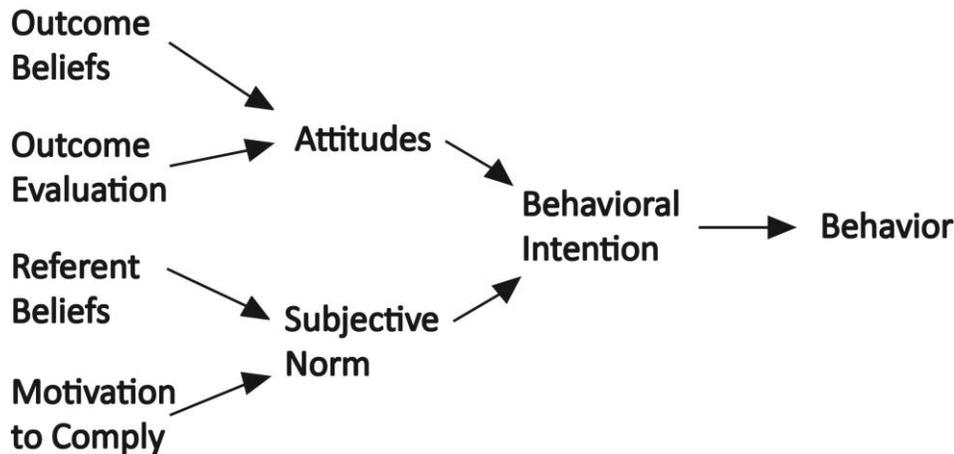
Pulling inspiration from the work of Dulany and the cognitive processes in his Theory of Propositional Control (1968), Theory of Reasoned Action included cognitive process components (Ajzen, 2012). These were referred to in Dulany's work as the distribution of reinforcement hypothesis and the behavioral hypothesis (Ajzen, 2012).

In Theory of Reasoned Action, the distribution of reinforcement hypothesis was coined a behavioral belief (Ajzen, 2012). A behavioral belief is an individual's determination based on their own personal feelings and opinions, also known as subjective probability, whether a certain behavior will result in a certain outcome (Ajzen, 2012). Additionally, behavioral beliefs include a subjective value, the individual's evaluation of the certain outcome (Ajzen, 2012). Behaviors can have multiple outcomes, resulting in multiple behavioral beliefs associated with the different potential outcomes (Ajzen, 2012). For example, college students and their behavioral beliefs about alcohol and marijuana use were investigated (Armitage et al., 1999). Some of the held

behavioral beliefs were "makes me more sociable," "leads to me having poorer physical health," "will result in my becoming dependent on it," "will result in me getting into trouble with authority," and "makes me feel good" (Armitage et al., 1999, p. 306).

Theory of Reasoned Action assumed behavioral beliefs and outcome evaluations come together to develop a positive or negative attitude toward the behavior (Ajzen, 2012). The outcome evaluation proportionally contributes to attitude to an individual's subjective probability a behavior will result in a certain outcome, represented by the expectancy-value model of attitude portion of Theory of Reasoned Action (Ajzen, 2012). Theory of Reasoned Action accounted for the multiplicative nature of beliefs and values (Ajzen, 2012). In 1963, Fishbein proposed a summation model of attitudes which would become the basis for the expectancy-value model of attitude in Theory of Reasoned Action along with other expectancy-value research at the time (Ajzen, 2012).

The expectancy-value model in Theory of Reasoned Action did have some variation from other expectancy-value models of attitude formations at the time of Fishbein and Ajzen's research (Ajzen, 2012). One variation was the assumptions made about relations between beliefs and attitudes (Ajzen, 2012). In Theory of Reasoned Action, the researchers assume beliefs that a behavior will result in a certain outcome and outcome evaluations will produce a positive or negative attitude towards the behavior (Ajzen, 2012). Furthermore, Theory of Reasoned Action ascertains that attitude impacts intention to engage in the behavior (Ajzen, 2012). Only certain beliefs will result in an attitude. These beliefs must be readily accessible in memory (Ajzen, 2012).

The other component of Dulany's Theory of Propositional Control accounted for in Theory of Reasoned Action was the behavioral hypothesis (Ajzen, 2012). Ajzen and Fishbein

referred to this as a normative belief in Theory of Reasoned Action, an individual's own personal feelings and opinions about whether a certain normative referent wants the individual to perform a behavior (Ajzen, 2012). A normative referent possesses a form of influence over an individual (Ajzen, 2012). Examples of normative referents are spouses or partners, family members and friends. Additional normative referents such as coworkers, health professionals, and law enforcement are dependent on the behavior being performed (Ajzen, 2012). An individual can form their understanding of what a referent would like an individual to do based on being told so or by assuming what the referent would want the individual to do (Ajzen, 2012).

The normative beliefs about different referents combine to result in the overall perceived social pressure (Ajzen, 2012). This is known as the subjective norm, and it also only consists of normative beliefs readily accessible in an individual's memory (Ajzen, 2012). Normative beliefs range in strength based on an individual's motivation to comply with a referent (Ajzen, 2012).

Subjective norms are separate from attitudes toward a behavior (Ajzen, 2012). This is because an individual can have their own attitude toward a behavior that is different from the perceived social pressure (Ajzen, 2012). However, there is a lower likelihood of completely differing attitudes and subjective norms due to events and experiences leading to aligning behavioral and normative beliefs (Ajzen, 2012).

While Theory of Reasoned Action served in making attitude research more defined and measurable, it did possess one main limitation. The Theory of Reasoned Action Model did not account for behaviors that an individual might not have complete control over performing, which would become better accounted for by Ajzen's (1985) Theory of Planned Behavior (Ajzen, 1991). This element of having the complete ability to perform a behavior was a critical extension

from the Theory of Reasoned Action Model to the Theory of Planned Behavior because it plays a part in behavioral intention (Madden et al., 1992).

Theory of Planned Behavior

Ajzen's (1985) Theory of Planned Behavior was derived from Ajzen and Fishbein's (1975) Theory of Reasoned Action to address the limitations of the Theory of Reasoned Action Model such as its inability to handle behaviors an individual does not have complete control over performing. The core focus of Theory of Planned Behavior is to "predict and explain human behavior in specific contexts," and a central component of Theory of Planned Behavior "is the individual's intention to perform a given behavior" (Ajzen, 1991, p. 181). Intentions are motivational factors that can be responsible for influencing behavior as well as indications of how much effort an individual will take to carry out a behavior (Ajzen, 1991).

Theory of Reasoned Action assumed most behaviors important to social psychologists would be ones that individuals have volitional control of (Ajzen, 2012). Volitional control means that an individual can choose to perform a behavior at any given time (Ajzen, 1991). Intention can be impacted if an individual does not have volitional control (Ajzen, 1991). In practice, Ajzen recognized the shortcomings of not accounting for factors impacting the ability of an individual to perform a behavior (Ajzen, 2012). The need for consideration of the degree of control an individual has over a behavior led to the creation of Theory of Planned Behavior (Ajzen, 2012).

In addition to volitional control, an individual needs actual control to perform a behavior. Actual control includes non-motivational factors such as opportunities and resources, which can include time, money, others involvement and cooperation, and necessary skills (Ajzen, 1991). An individual should be successful in performing a behavior if they have actual control and

intention to perform a behavior (Ajzen, 1991). This means that if an individual has both intention and ability, or behavioral control, they should be successful in performing a behavior (Ajzen, 1991).

Another differentiation between Theory of Planned Behavior and Theory of Reasoned Action is that Theory of Planned Behavior accounts for perceived behavioral control (Ajzen, 1991). Ajzen determined through his research and the collective opinions of other researchers that of even more interest than actual control is perceived behavioral control. Perceived behavioral control is an individual's perception of how easy or difficult it will be to perform a behavior (Ajzen, 1991). Perceived behavioral control can differ based on the situation and be impacted by previous experiences (Ajzen, 1991). Ajzen's view of perceived behavior control had close alignment with Bandura's (1977, 1982) concept of self-efficacy, an individual's assessment of how well they can perform a series of action to deal with a determined situation. Perceived behavioral control and behavioral intention help predict behavior achievement in the Theory of Planned Behavior Model (Ajzen, 1991).

Theory of Planned Behavior proposed three determinants of intention: attitude toward the behavior, subjective norm, and perceived behavioral control as depicted in Figure 2.4 (Ajzen, 1991). Attitude toward the behavior is the "degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen, 1991, p. 188). Subjective norm is the "perceived social pressure to perform or not to perform the behavior" (Ajzen, 1991, p. 188). Like previously mentioned, perceived behavioral control is the perception of the difficulty of performing a behavior (Ajzen, 1991). Depending on the situation, these three determinants of intention can vary in their overall impact (Ajzen, 1991).

Figure 2.4. *Theory of Planned Behavior*

Attitude toward the Behavior — Subjective Norm — Perceived Behavioral Control → Intention → Behavior
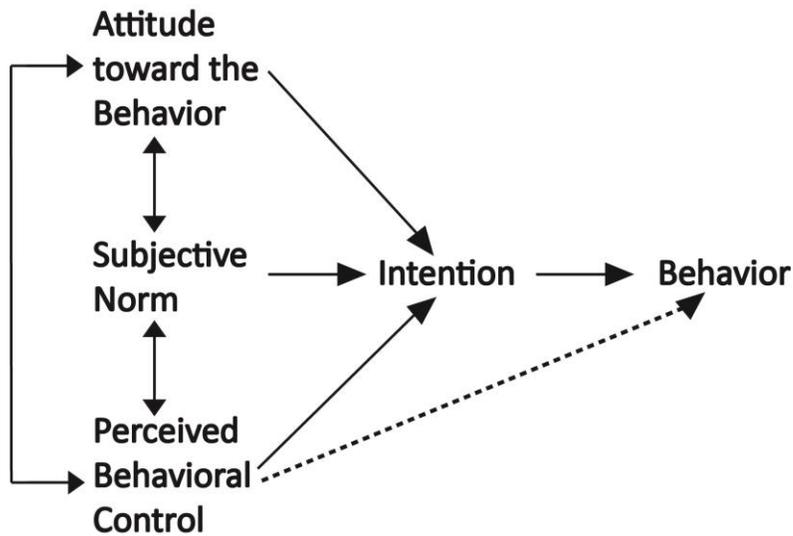
To be able to predict behavior, three conditions must be met (Ajzen, 1991). First, the context surrounding a behavior must be specific, and the intentions and perceptions of control must be related to the specific context (Ajzen, 1991). The second condition is intention and perceived behavioral control must remain constant with no intervening events between assessment and observation of the behavior (Ajzen, 1991). If someone intervenes between an individual's assessment of intention and perceived behavioral control and when the individual performs the behavior, the prediction of the behavior could be impacted (Ajzen, 1991). The third necessary condition for predicting behavior is the accuracy of perceived behavioral control (Ajzen, 1991).

Intention and perceived behavioral control are important components of predicting behavior (Ajzen, 1991). In some situations, one component might have higher importance than the other (Ajzen, 1991). There also might be some situations where only one component is needed (Ajzen, 1991).

Since its creation, Theory of Planned Behavior has been used by researchers looking at a multitude of behaviors such as exercising, eating healthier, using public transportation, and donating blood (Ajzen, 2012). The theory was also designed to help researching behavior

modification (Ajzen, 2012). Theory of Planned Behavior has served as the conceptual framework for behavioral intervention and modification studies pertaining to infant sugar consumption (Beale & Manstead, 1991), effective job search behaviors (van Ryn & Vinokur, 1992), and testicular self-examination (Brubaker & Fowler, 1990). To effectively change behavior, individuals must be motivated to perform a certain behavior and behavior performance must be solidified (Ajzen, 2012).

Theory of Planned Behavior in Food and Agriculture

Theory of Planned Behavior has been applied to food consumption research and has served as a quality predictor of food-related intentions such as the consumption of soft drinks (Kassem & Lee, 2004), fish (Verbeke & Vackier, 2005), and dairy products (Kim et al., 2003). Most of these studies concluded that personal attitude toward the food-related item was the most prevalent predicter of behavior (Ajzen, 2015). A different study found this was not necessarily the case with behaviors pertaining to consuming a healthy diet such as low-fat and high-fiber products (Conner et al., 2002). The strongest predictor of behavior in this study was perceived behavioral control, meaning that the perceived difficulty of keeping a healthy diet was likely to reduce an individual's intention to perform the behavior (Conner et al., 2002). Placing a nutritional warning label on processed food was found to result in significant impacts on processed food choices being made by consumers in Chile (Aliaga-Ortega et al., 2019). Individuals with a negative attitude and perceived behavioral control towards foods with nutritional warning labels were likely to avoid these foods (Aliaga-Ortega et al., 2019).

Theory of Planned Behavior has also been used for research in agricultural contexts. A literature review on research that has been conducted to understand farmers' motivations for adopting recommended agricultural practices found the most common farm management aspects

being studied in relation to farmer behavior adoption were the following: land and landscape, biosecurity and disease control, alternative farming systems, specific technologies and practices, and participation in agri-environmental schemes (Sok et al., 2020).

Theory of Planned Behavior in Celebrity Endorsement

Theory of Planned Behavior has been used to guide studies in celebrities to look at components of the model (Cuomo et al., 2019; Rahmen et al., 2021), evaluate the effects of celebrity transgressions (von Sikorski et al., 2018), and determine Theory of Planned Behavior's impact on brand awareness (Ndlela & Chuchu, 2016). In a study conducted by Rahmen et al. (2021), celebrity endorsements had a positive effect on participants attitudes toward an advertisement and subjective norms impacted consumer purchase intention, while perceived behavioral control had no significant impact on consumer purchase intention. Cuomo et al. (2019) found based on Theory of Planned Behavior that celebrity endorsements impacted brand and purchase intentions. On the other hand, Ndlela and Chuchu (2016) found in their study of celebrity endorsements guided by Theory of Planned Behavior that awareness of a brand was not enough to drive purchase intention. Rather, brand loyalty was a stronger influence on purchasing behavior (Ndlela & Chuchu, 2016).

Theory of Planned Behavior in Influencer Marketing

Researchers interested in influencer marketing have also turned to Theory of Planned Behavior to help explain how influencers effect the behaviors of their audiences. One application of this was done when looking at how fashion influencers can impact consumer decision-making (Chetioui et al., 2019). From this study, a conceptual model was proposed for how influencers impact purchase intention based on a foundation from Theory of Planned Behavior (Chetioui et al., 2019). The study found consumers' attitudes were significantly impacted by perceived

credibility, trust, perceived expertise, perceived congruence, perceived behavioral control and subjective norms. Attitudes towards influencers were impacted the most by perceived credibility and the least by subjective norms. Ultimately, fashion influencers had an impact on consumers' purchase intention (Chetioui et al., 2019). Another study looked at aspects of influencer marketing that impact consumer behavior using Theory of Planned Behavior (Chopra et al., 2021). Attitude and perceived behavioral control were found to increase domain knowledge, resulting in an impact on consumer behavior. Personal relevance, trust, and inspiration also effected consumer behavior (Chopra et al., 2021).

While consumer decisions and influencer marketing in relation to Theory of Planned Behavior have been researched separately, there is a need to investigate how influencer marketing influences consumer decisions in the context of the food and agriculture industry (Rosengren & Campbell, 2021)

Multi-Step Flow Theory helps explain the flow of influence and information from the media to the public (Weimann, 1982). The theory has been developed and adapted to represent the flow of communication as society changes to incorporate new advancements like the internet (Burke, 2017). Multi-Step Flow Theory, and one of its central components, opinion leadership, have been represented in food and agriculture contexts to explain how information about agriculture and new innovations is spread (Arndt, 1968; Baba et al., 2019). It has also been incorporated in research on celebrity endorsements and influencer marketing (Burke, 2017) to explain how celebrities and influencers are modern day opinion leaders who exert their opinions into the marketplace (Zia et al., 2022) through interpersonal communication and personal influence (King & Summers, 1970). Influencers are especially able to do this through their connection with their audience and overall appeal to consumers (Torres et al., 2019). Opinion

leadership has been interwoven in research rooted in Theory of Planned Behavior because of the role it can play in behavior (Howell et al., 2015). On its own, Theory of Planned Behavior is designed to predict and explain the behavior of an individual in specified contexts like purchasing decisions at a grocery store (Ajzen, 1991). In order to perform a behavior, an individual must first have behavioral intention (Ajzen, 1991). The factors which impact behavioral intention are attitude toward the behavior, subjective norm, and perceived behavioral control (Ajzen, 1991). Theory of Planned Behavior also has been applied in studies with food and agricultural contexts to explain food choice behaviors and the adoption of new farming practices (Ajzen, 2015; Sok et al., 2020). The theory has been used to guide studies in celebrity endorsements and influencer marketing (Rahmen et al., 2021; Chetioui et al., 2019). Connecting back to how opinion leaders can impact the Theory of Planned Behavior, research in celebrity endorsements has found positive attitudes toward an advertisement and high subjective norms increase consumer purchasing behavioral intention more so than other Theory of Planned Behavior factors (Rahmen et al., 2021). Research guided by Theory of Planned Behavior in influencer marketing has increasingly connected the idea of opinion leaders and how they exert influence on the model components of Theory of Planned Behavior (Chetioui et al., 2019). This study will join the literature that has worked to piece together how opinion leadership can alter the Theory of Planned Behavior confines.

Summary

The available literature has primarily focused on the characteristics of celebrity endorsements and influencer marketing as well as the variables of their effectiveness individually. Few research studies have compared celebrity endorsements and influencer marketing, especially within a food and agricultural context. The studies of celebrity

endorsements and influencer marketing that do possess food contexts, mostly focus on non-commodity products. Aside from Powell (2022), there are no known studies evaluating influencer marketing in the context of commodity-based organizations. While experimental research designs have been used in celebrity endorsement, influencer marketing, and comparison studies of the two, research is limited to non-experimental research designs for related studies in food and agriculture. Research in this realm is needed because commodity organizations are using celebrities and influencers in their marketing strategy (Powell, 2022). With the varying costs of these partnerships (Yu, 2020), these strategies impact how producer financial contributions are being spent to meet the goals of commodity organizations. This research study starts to fill the research gap comparing celebrity endorsements and influencer marketing in food and agricultural contexts, especially when used by commodity focused organizations.

Chapter 3 - Methodology

Overview

This chapter outlines the details of the research design, population and sample, instrumentation, data collection, and data analysis, which were all guided by Multi-Step Flow Theory, opinion leadership, Theory of Planned Behavior, and previous literature on studies in celebrity endorsements and influencer marketing. The stimuli creation process is also detailed in this chapter. Instrument reliability and validity are included in this chapter to demonstrate the rigor of the research.

As established in the previous chapters, the purpose of this study was to determine how endorsement type used by a commodity organization impacts consumer attitudes and their perceived source credibility toward the endorsement; and evaluate the impact of endorsement type on consumer intention to purchase a commodity product and visit the commodity organization's website. Three research questions and one hypothesis were investigated through the following methodology during this study:

Research Questions

1. How does the type of endorsement impact consumer attitude toward an endorsement used by commodity organizations?

2. How does the type of endorsement impact consumer intention to purchase a commodity product?

3. How does the type of endorsement impact consumer intention to visit a commodity organization's website?

Hypothesis

1. An influencer endorser will be perceived as being more credible compared to a celebrity endorser.

Research Design

A quantitative experimental research design was selected for this study to address the research questions. Quantitative research is designed to investigate cause-effect relationships (Gunter, 2002). A randomized, between-subjects research design was used to test the experimental manipulation of celebrity and influencer endorsements on the participants' behavioral intentions, attitudes, and perceptions of source credibility. The between-subjects research design allows researchers to create a controlled environment where participants receive different treatments with the goal of determining a causal relationship (Charness et al., 2012). Under this design, each participant is randomly assigned to one of the treatment conditions. The behaviors observed between the different treatments are then compared (Charness et al., 2012).

Dividing the participants randomly into three different treatment conditions allowed for the investigation of the research questions of the study. The treatment conditions for this experiment were three mock Instagram posts which emulated the independent variable, endorsement type. Each mock Instagram post included a photo, which was the same for all posts, and a corresponding caption which established the independent variable of endorsement type. The photo used for the posts was created by the researcher through staging a photo with a college-aged female holding a plate containing a pork chop and two vegetable sides. The Instagram posts were then created using the free mock Instagram post creation website, Zeoob.

Each of the Instagram posts were designed to appear like they were posted by a mock commodity organization account. An organization account for posting was selected rather than an influencer or celebrity account for consistency across the endorser types. The two key

endorsement marketing components of parasocial interaction and trustworthiness are established when an endorsement post from an organization account containing a product also includes a person (Jin et al., 2021).

Differentiation of the Instagram posts based on the type of endorsement (celebrity, influencer, and control) was displayed through the description of the endorser participants viewed before the stimuli similar to in Schouten et al. (2020) and the wording of the Instagram posts' caption. In this study, the control was a non-descript endorser who is meant to emulate an ordinary consumer. The celebrity endorser was established as an actress and model due to their prevalence in U.S. celebrity endorsements (Belch & Belch, 2013; Choi et al., 2005; Schimmelpfennig, 2018). The influencer endorser was established as a social media beauty influencer and blogger to maintain consistency with the celebrity endorser type selected. Approximately 43% of consumers follow beauty influencers meaning they have high access to consumers (Santora, 2022). Additionally, a blogger was also chosen due to their common use by commodity organizations (Powell, 2022). Each description of the endorsement was similar in visual length and level of language. Three manipulation checks, described further later in the chapter, were conducted on the stimuli to refine the verbiage in the description given directly before presenting the stimuli.

Participants who were assigned to the control condition received the following endorser description: "Please carefully view and read in entirety the following Instagram post containing a person who enjoys cooking. She commonly prepares dishes for herself and her friends in her free time. Here she is sitting down for dinner." After reading the description, participants were able to view the control condition Instagram post (see Figure 3.1).

Figure 3.1 *Control Stimuli*

Participants in the celebrity condition received the following description: "Please carefully view and read in entirety the following Instagram post containing celebrity actress and model, Hannah Phillips. Hannah started her career as a model. Since then, she has also acted in multiple tv shows on Netflix, Hulu, and other streaming services." After viewing and reading the description, participants were prompted to view the celebrity condition Instagram post (see Figure 3.2).

Figure 3.2. *Celebrity Stimuli*

Participants in the influencer condition received the following description: "Please carefully view and read in entirety the following Instagram post containing social media beauty influencer and blogger, Hannah Phillips. Hannah started blogging about the beauty products she was using. Since then, she has grown her social media presence and routinely shares beauty recommendations and college hacks with her followers." After reading the description, participants were able to view the influencer condition Instagram post (see Figure 3.3).

Figure 3.3. *Influencer Stimuli*

Independent Variables

The independent variable in this study was endorsement type. The two endorsement types were celebrity endorsement and influencer endorsement. Celebrity endorsement was operationalized using Bergkvist and Zhou's (2016) definition as "an agreement between an individual who enjoys public recognition (a celebrity) and an entity (eg., a brand) to use the celebrity for the purpose of promoting the entity" (p. 644). Influencer endorsement was operationalized as an agreement between an individual who exhibits some combination of

desirable attributes that allow them to influence a disproportionately large number of others (an influencer) and an entity (e.g., a brand) to use the influencer for the purpose of promoting the entity (Bakshy, 2011; Bergkvist & Zhou, 2016).

For this study, it was important to define the differences between the endorsement types. The difference between a celebrity and influencer is largely accounted for in their career path. Influencers develop their social media following to gain popularity, typically without the help of agents, managers, or publicists to manage their image in the early stages of their career and popularity building (Gräve & Bartsch, 2022). On the other hand, celebrities gain popularity with others with the help of public image support because they first have success as an actor/actress, singer, model, or any other form of celebrity. Celebrities often hold a level of social prestige (Gräve & Bartsch, 2022). The celebrity, influencer, and control endorser in this study was a fictional person. The organization was a mock commodity organization titled the U.S. Pork Association. Pork was selected as the commodity for this study because while pork is the most consumed protein product in the world (Pork Checkoff, n.d.b), per capita consumption of pork is lower than chicken and beef in the U.S. (Kuck & Schnitkey, 2021). Furthermore, research conducted by the Pork Checkoff has found that 25% of current pork consumers are considering decreasing their pork consumption due to concerns they have about their health and safety as well as ethical worries (Pork Checkoff, 2021a).

Dependent Variables

The dependent variables in this study were consumer attitudes for RQ1, consumer behavioral intention to purchase a commodity product (pork) for RQ2, consumer behavioral intention to visit a commodity organization's (U.S. Pork Association) website for RQ3, and perceived source credibility for H1. According to Azjen (2006), "[a]n attitude is a disposition to

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respond favorably or unfavorably to an object, person, institution, or event" (p. 3). Behavioral intention in both RQ2 and RQ3 were developed based on TPB's behavioral intention, which is an individual's intention to perform a certain behavior (Ajzen, 1991). The behavioral intentions to purchase a commodity product and visit a commodity organization website were selected for this study because they help measure if commodity organizations are meeting their goals of increasing commodity demand and consumer education (Forker & Ward, 1993; Hughes et al., 2016). For H1, source credibility was evaluated based on Ohanian (1990) definition of source credibility as "a communicator's positive characteristics that effect the receiver's acceptance of a message" (p. 41).

Individual Difference Variables

In addition to the previously mentioned independent and dependent variables, individual difference variables were also measured in this study. Individual difference variables are variables outside of the independent variables that can impact the results of a study (Wimmer & Dominick, 2014). In some cases, these variables need to be controlled for during analysis and in others, these variables can be used to categorize subjects for further analysis of individual difference effects (Wimmer & Dominick, 2014). Including these variables in an experiment allows for them to be controlled for (Wimmer & Dominick, 2014). The demographic individual difference variables measured were gender identity, age, education level, academic year, and academic college to determine how these variables impacted the results. The other individual difference variables measured were current behaviors, social media use, agricultural disposition, endorsement susceptibility, subjective norm, and perceived behavioral control.

Instrumentation

The instrumentation used for this study was a questionnaire created using the online survey and research platform, Qualtrics. The instrument used for data collection can be found in Appendix B. Online experiments like this study are more convenient for participants, allow for a large and diverse sample, can be less expensive, and prevent experimenter bias (Wimmer & Dominick, 2014). Institutional Review Board approval was received before the distribution of the instrument and can be found in Appendix A. The survey instrument allowed for the three stimuli conditions to be randomly assigned to the participants, otherwise every study participant was exposed to the same questions. The instrument design (see Figure 3.4) was created following the design recommendations of Dillman et al. (2014).

Figure 3.4. *Instrument Design*
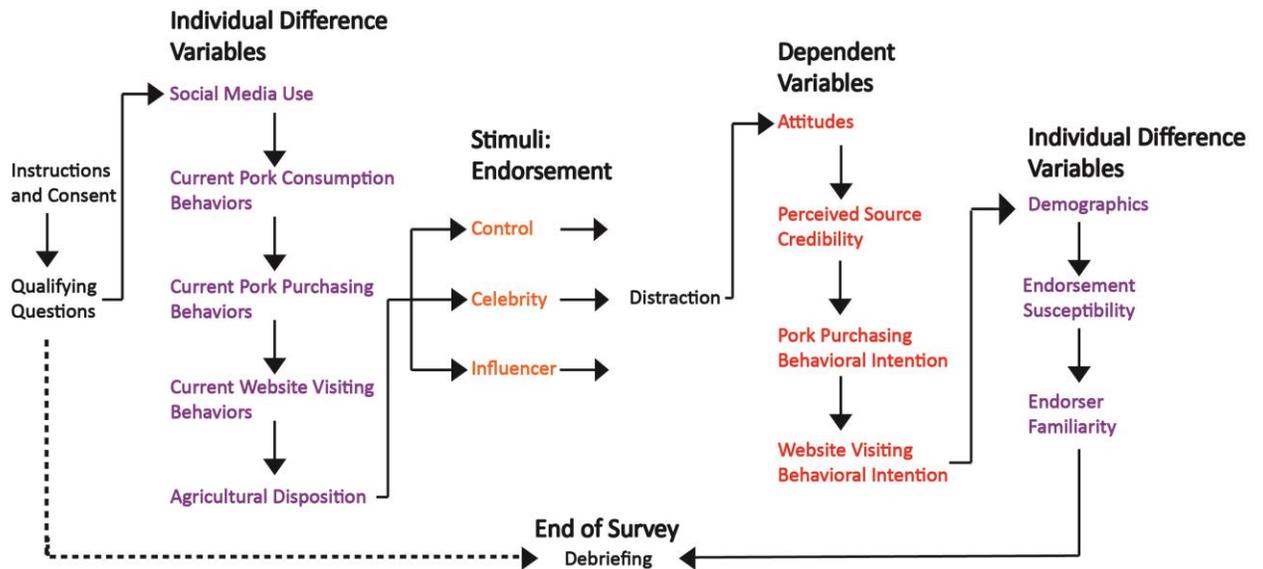
Measures

The following section details the measures included in the quantitative Qualtrics questionnaire.

Attitudes

The dependent variable measured in the instrument for RQ1 was attitude toward the Instagram post the participants viewed. Attitude is one of the three determinants of intention in the Theory of Planned Behavior (Ajzen, 1985). Five, seven-point semantic differential scales were adapted from Spears & Singh (2004) and Schouten et al. (2020) to measure the dependent variable of attitudes. Using these scales, participants were asked to rate their attitudes toward the Instagram post they viewed during the stimulus portion of the questionnaire. The semantic differential scales were 1 = *unappealing* to 7 = *appealing*, 1 = *bad* to 7 = *good*, 1 = *unpleasant* to 7 = *pleasant*, 1 = *unfavorable* to 7 = *favorable*, and 1 = *unlikable* to 7 = *likable* (Spears & Singh, 2004).

Source Credibility

The dependent variable measured in the instrument for H1 was perceived source credibility. Source credibility impacts the persuasiveness of a source (Metzger et al., 2003). The source in this study was operationalized as either the celebrity, influencer, or control individual. There are three dimensions of source credibility, which are expertise, trustworthiness, and attractiveness (Ohanian, 1990). The assessment of source credibility of the endorser was determined based on Ohanian's subscales of credibility. Trustworthiness was measured on five seven-point semantic differential scales (Ohanian, 1990; Schouten et al., 2020; Spry et al., 2011) with participants being asked to rate the trustworthiness of the person in the Instagram post they viewed. The semantic differential scales were 1 = *undependable* to 7 = *dependable*, 1 = *dishonest* to 7 = *honest*, 1 = *unreliable* to 7 = *reliable*, 1 = *insincere* to 7 = *sincere*, and 1 = *untrustworthy* to 7 = *trustworthy*. Participants were asked to rate the expertise of the person in the Instagram post they viewed. The semantic differential scales for expertise were 1 = *not an expert* to 7 = *expert*, 1 = *inexperienced* to 7 = *experienced*, 1 = *unknowledgeable* to 7 = *knowledgeable*, 1 =

unqualified to 7 = *qualified*, and 1 = *unskilled* to 7 = *skilled* (Ohanian, 1990; Schouten et al.,

2020; Spry et al., 2011). The last dimension of source credibility, attractiveness, was determined

by asking participants to rate the attractiveness of the person in the Instagram post they viewed.

The semantic differential scales were 1 = *unattractive* to 7 = *attractive*, 1 = *not classy* to 7 =

classy, 1 = *ugly* to 7 = *beautiful*, 1 = *plain* to 7 = *elegant*, and 1 = *not sexy* to 7 = *sexy* (Ohanian,

1990; Schouten et al., 2020; Spry et al., 2011).

Behavioral Intention to Purchase a Pork Product

The dependent variable measured in the instrument for RQ2 was behavioral intention to

purchase a pork product. Behavioral intention is one of the strong, measurable drivers and

predictors of behavior according to the Theory of Planned Behavior model (Ajzen, 1991).

Behavioral intention to purchase a pork product was measured twice. The first time it was

measured was during the current pork purchasing behaviors portion of the instrument design

before the stimuli exposure. Participants were asked to indicate how likely they are to purchase a

pork product when they are looking for a source of protein. A five-point Likert-type scale was

adapted from Schouten et al. (2020) to allow participants to state their likelihood from 1 = *very*

unlikely to 5 = *very likely*. The first measure served as an individual difference variable measure.

After the stimuli exposure, participants were asked to indicate how likely they are to

purchase a pork product the next time they are looking to purchase a source of protein using a

five-point Likert-type scale derived from Schouten et al. (2020) to assess behavioral intention.

The scale ranged from 1 = *very unlikely* to 5 = *very likely* (Schouten et al., 2020). The second

behavioral intention to purchase a pork product measure was directly used for the RQ2

dependent variable measure.

Behavioral Intention to Visit a Commodity Organization's Website

Another component of the Theory of Planned Behavior Model included in the instrument was the behavioral intention to visit a commodity organization's website. Social media platforms like Instagram can serve as an opportunity for organizations to drive traffic to their websites (Killian & McManus, 2015). In the case of commodity organizations, these websites often contain educational content for consumers (Pork.org, n.d.).

Behavioral intention to visit a commodity organization's website was also measured twice. The first time it was measured was during the current website visiting behaviors portion of the instrument design. Participants were asked to indicate their likelihood of visiting a website included in the "learn more" feature at the bottom left of an Instagram photo on a five-point Likert-type scale ranging 1 = *very unlikely* to 5 = *very likely* (Schouten et al., 2020). The first measure served as an individual difference variable measure.

After the stimulus exposure, behavioral intention to visit a commodity organization's website was measured for a second time. Participants were asked to indicate their likelihood of visiting a website included in the "learn more" feature at the bottom left of the Instagram photo they viewed on a Likert-type scale ranging from 1 = *very unlikely* to 5 = *very likely* (Schouten et al., 2020). The second behavioral intention to visit a commodity organization's website measure was directly used for the RQ3 dependent variable measure.

Subjective Norm

Subjective norms are a component of the Theory of Planned Behavior Model and served as an individual difference variable in this study. Subjective norms are the social pressure an individual feels to perform or not perform a behavior (Ajzen, 1991). Combined with perceived behavioral control and attitude toward the behavior, subjective norms can impact behavioral intention to various degrees (Ajzen, 1991). Subjective norms of the two behavioral intentions

being measured in the instrument and current pork consumption were determined using five-point Likert-type scales (Ajzen, 2006). During the current pork consumption behavior portion of the instrument, participants were asked to indicate their agreement with the statement that most people like them eat pork products on a range from 1 = *disagree* to 5 = *agree*. During the current pork purchasing behavior portion of the instrument, participants were asked to indicate their agreement with the statement that most people like them purchase pork products on a range from 1 = *disagree* to 5 = *agree*. Related to the behavioral intention of visiting a commodity organization website, participants were asked during the current website visiting behavior portion of the instrument to indicate their agreement with the statement that most people like them visit a website included in an Instagram post on a scale ranging from 1 = *disagree* to 5 = *agree* (Ajzen, 2006).

Perceived Behavioral Control

Within the Theory of Planned Behavior model, perceived behavioral control is an individual's perception of the ease or difficulty of performing a behavior, which can impact behavioral intention (Ajzen, 1991). Perceived behavioral control for the behavioral intention of purchasing a pork product was assessed during the current pork consumption behavior and current pork purchasing behavior sections of the instrument with two five-point scale questions based on Ajzen (2006). The first question asked participants to respond with their agreement to the statement that they are confident that they can eat a pork product if they would like to on a Likert-type scale ranging from 1 = *disagree* to 5 = *agree*. The second question asked participants to respond with their agreement to the statement that they are confident that they can purchase a pork product if they would like to on a Likert-type scale ranging from 1 = *disagree* to 5 = *agree*. Perceived behavioral control was also determined for the behavioral intention to visit a

commodity organization website based on Ajzen (2006). Participants were asked during the current website visiting behavior section of the instrument to respond with their agreement to the statement that they are confident that they can visit a website from an Instagram post if they would like to on a scale from 1 = *disagree* to 5 = *agree*.

Current Behaviors

The current behaviors of participants related to the dependent variables of behavioral intention to purchase a pork product and behavioral intention to visit a commodity organization's website were measured in this study as individual difference variables. These behaviors were measured because they can impact participant's likelihood to engage in the dependent variables measured (Ajzen, 2006). Questions related to current behaviors in the context of these studies were adapted based on Ajzen (2006). Participants were asked how often they consume a pork product on a regular basis on a scale from 1 = *never* to 6 = *several times a day*. They were also asked through a multiple-choice question what prevents them from consuming a pork product. For pork purchasing, participants were asked to indicate their likelihood (1 = *very unlikely* to 5 = *very likely*) to purchase a pork product when looking to purchase a source of protein. For website visiting, participants were asked to indicate their likelihood (1 = *very unlikely* to 5 = *very likely*) to click on the "learn more" feature on an Instagram post.

Social Media Use

The use of social media by participants can impact their familiarity with the content of the study because the treatment was embedded in an Instagram post (Meryem & Asma, 2023). For these reasons, social media use was chosen as an individual difference variable. Questions related to social media use in the context of this study were adapted from Hill et al. (2022). Subjects were asked whether they had an Instagram account. As a follow-up question, they were

asked to answer how often they open their Instagram account on a scale from 1= *several times a day* to 6 = *never*.

Demographics

The demographic individual difference variables included in the instrument were age, gender, and education. Gender is an important variable to consider in the analysis of questionnaire responses due to the known effect of gender on how an individual responds to a celebrity or influencer endorsement. Same gender alignment between an endorser and participant is more persuasive than opposite gender alignment (Hudders & De Jans, 2021). Gender was measured through a multiple-choice question asking participants to select their gender identity. Age is also a known mediator of endorser effectiveness with conflicting conclusions (Grigsby & Skiba, 2022; Atkin & Block, 1983; Ohanian, 1990; Frieden, 1984). At the beginning of the questionnaire, respondents were asked to report their age in years. If participants were not 18 years old or over, they were sent to the end of the questionnaire.

Education level, academic rank, and academic college were selected as demographic individual difference variables based on their relevance to the target population of the study. These questions allowed for the analysis of education-related effects on participants' responses. First, participants were asked to indicate the years of schooling they have completed toward their undergraduate degree with multiple choice options being given. Academic rank was assessed using a multiple-choice question where participants were asked to select their academic year standing. For the final education question, participants were given multiple-choice options to select the college in which their major resides.

Agricultural Disposition

Agricultural disposition is an important individual difference variable which was measured through the instrument because prior experience can impact intention to perform related behaviors (France et al., 2007). To understand participants' experiences with production agriculture, five five-point Likert scales were used for the statements: "*I am involved in production agriculture*," "*I am emotionally connected to the agriculture industry*," "*I strongly identify with the agriculture industry*," "*I trust the livestock production industry*," "*I have concerns about the safety of meat-based food products*," and "*I believe livestock producers in the U.S. are dedicated to producing safe products*." For these scales, 1 = *strongly disagree* and 5 = *strongly agree* (Hill et al., 2021).

Endorsement Susceptibility

Endorsement susceptibility encompasses the participants' previous interactions on social media with endorsers and if they have made purchasing decisions because of endorser recommendations. Endorsement susceptibility served as an individual difference variable which was measured through the instrument due to prior experience's potential impact on intention (France et al., 2007). Participants were asked to indicate if they currently follow any celebrities or influencers on Instagram. If they selected "*yes*" for either of the questions, they were asked to indicate if they have ever purchased something based on the recommendation of a celebrity or influencer on Instagram. Those that selected "*yes*" were then asked to indicate how often based on a scale from 1 = *never* to 4 = *always*.

Population and Sample

The population for this study was Kansas State University undergraduate students. This population was selected due to the relevance of influencer marketing to the age group of this population (Enke & Borchers, 2019), their growing market power (Fontein, 2019), and their

meat consumption (Daniel et al., 2011). As found by Enke and Borchers (2019), social media influencers are especially beneficial for reaching younger audiences such as teenagers and young adults. Generation Z, born between 1995 and 2010, has a rising share of the overall spending power with over $143 billion of spending power, making them an important audience for businesses and organizations to reach (Fontein, 2019). Of the Kansas State University undergraduate population in 2021, 50.9% are males and 49.1% are females. 34.3% of Kansas State undergraduate students are 19 years old or younger, 56.8% are between 20 and 24 years old, 7.3% are between 25 and 39 years old, and 1.6% are 40 years old and over (Kansas State University, 2021). According to a 2011 study conducted by Daniel et al. (2011), the most meat consumption occurs for U.S. citizens between 20 to 49 years of age. However, only 61% of Generation Z respondents viewed meat as being a part of the American identity in a 2019 study compared to 72% agreeance in Millennials and 76% agreeance in Generation X and Baby Boomers (Shahnabdeh, 2022).

The questionnaire for this study was distributed to all undergraduate students ($N =$ 11,945) at Kansas State University on the Manhattan, Kansas campus. The sampling technique used was a census, a total population sampling (Wimmer & Dominick, 2014). Total population sampling is a form of non-probability sampling, meaning statistical generalizations cannot be made. However, with total population sampling, analytical generalizations can be made about the population (Laerd Dissertation, n.d.). Analytical generalizations apply study findings to theoretical or conceptual application (Polit & Beck, 2010). The randomization of the participant assignment to the three stimulus groups helped balance the effects of the non-probability sampling method and control biases in the study (Gunter, 2002).

Procedure and Data Collection

To ensure the instrument was well designed before it was made available to sample participants, the instrument was reviewed for face and content validity by two agricultural communications professors and one media and communications professor. Face and content validity are a critical part of instrument development (Connell et al., 2018). Face validity is the simplest form of validity where an instrument is reviewed to determine if it measures what it is supposed to (Wimmer & Dominick, 2014). Because face validity is a subjective measure, multiple experts should be employed to independently assess the instrument (Wimmer & Dominick, 2014). Content validity is the determination that the instrument used for a study pertains to the intended domains of the study and does not contain questions not belonging to the content domains (Sireci, 1998). The domains of a study are determined by first conducting a thorough review of the literature and consulting experts (Thorn & Deitz, 1989). According to Sireci (1998), "[t]he 'validity' in content validity refers to the credibility, the soundness, of the assessment instrument itself for measuring the construct of interest" (pg. 103). To determine content validity in this study, the judgmental method was employed with subject matter experts assessing the instrument content (Sireci, 1998).

Pilot Test

After developing face and content validity, a pilot test was conducted from February 9, 2023 to February 15, 2023 on a small sample of undergraduate students at Doane University. At total of seven usable responses were received. Pilot studies allow researchers to determine if there are any problems with their instrument and if any changes should be made (Wimmer & Dominick, 2014). This alternative population was selected due to its similarity to the main population. According to Wimmer and Dominick (2014), an acceptable sample size for pilot

tests is 10 to 50 subjects. Unfortunately, the pilot was limited to a small number of respondents based on access to an alternative population and time constraints.

The results from the pilot were reviewed to determine necessary adjustments but were not included in the study findings. The questionnaire was improved based on the pilot test results. Changes were made to the survey design to decrease the length of the questionnaire, including the removal of the attention checks. This was done due to the potential negative effects of attention checks on results such as noncompliance (Silber et al., 2022). In place of attention checks, response times were evaluated and respondents with abnormally quick response times were removed. The option for participants to go back to previous portions of the questionnaire was also added. The time length of the distraction portion of the questionnaire was adjusted to better fit the distractor video length.

One way to determine the internal consistency and validity of a scale used in an instrument is to calculate Cronbach's alpha (Tavakol & Dennick, 2011). Cronbach's alpha is often used to ensure multiple items on one scale are measuring the same concept. To confirm the scale and subscale measures adapted from previous studies fit to the context of the current study were reliable, Cronbach's alpha was used (Laerd Statistics, 2015). In this study, scales measuring one concept were used for the individual difference variable of agricultural disposition and the dependent variables of attitudes and perceived source credibility. For the individual difference variable of agricultural disposition, Tarpley et al. (2017) reported an acceptable reliability ($\alpha =$ .97) for the agricultural disposition scale. In this pilot test, the scale had a high level of internal consistency, as determined by a Cronbach's alpha of 0.781. For the dependent variable of attitudes, Schouten at el. (2020) confirmed an acceptable reliability ($\alpha = .93$) for their attitudes scale. For the pilot test, the scale has a high level of internal consistency, as determined by a

Cronbach's alpha of 0.918. For source credibility, Ohanian's (1990) study confirmed the items of the83anipulaes of credibility used were reliable. Trustworthiness had a Cronbach's alpha of 0.92 (Spry et al., 2011). Expertise had a Cronbach's alpha of 0.89 (Spry et al., 2011). Attractiveness had a Cronbach's alpha of 0.80 (Spry et al., 2011). Based on the pilot test, all subscales of credibility had a high level of internal consistency, as determined by a Cronbach's alpha of 0.987 for the trustworthiness subscale, 0.968 for the expertise subscale, and 0.957 for the attractiveness subscale.

Manipulation Check

After evaluating the validity of the stimuli through the manipulation check question in the pilot test, it was determined that the participants were identifying the control stimuli as all three of the endorser types. Because of this, the description of the Instagram post before the display of the stimuli was adapted. After adapting the description, a manipulation check test was sent to a convenience sample of Kansas State University graduate students. The first manipulation check revealed more changes were needed to ensure participants could recognize which stimuli represented each endorser type. Changes were made to the instructions given to participants, adaptations were made to the survey layout, and participants were given the option to return to the Instagram post. For the second manipulation check, each participant was asked to select the most appropriate description for each of the endorsers in the Instagram posts. After the completion of the second manipulation check ($n = 12$), it was found the changes made were effective. For the control stimuli, 75% of participants identified the endorser as being an undescribed person. For the celebrity stimuli, 91.67% of participants identified the endorser as being a celebrity actress and model. For the influencer stimuli, 100% of participants identified the endorser as being a social media beauty influencer and blogger. The researcher was confident

with these levels of agreement for the manipulation check of the stimuli, allowing for the removal of the manipulation check portion of the questionnaire for the main study sample. The manipulation check was removed because, "they can act as interventions which initiate new processes that would otherwise not occur" (Hauser et al., p. 1).

Main Study Data Collection

Data collection occurred from February 20, 2023, to February 27, 2023. The research questionnaire on the Qualtrics platform was distributed to all Kansas State University undergraduate students through approval from the Kansas State University Office of the Registrar. An online experimental mode was chosen because it allows for more convenience for participants and allows access to a larger sample (Wimmer & Dominick, 2014). All Kansas State University undergraduate students received an initial email (Appendix C) during the middle of the day on February 20, 2023 through Qualtrics encouraging them to partake in the study and providing them the link. Per the recommendations of Dillman et al. (2014), the initial recruitment email focused on increasing the benefits to the participants by asking for their help, telling how results will be used, and using a trustworthy sponsor. Participants were also informed during the initial recruitment email of the opportunity for them to enter an optional cash drawing. Recruiting participants can be done by offering incentives for participation (Wimmer & Dominick, 2014). For this study, Kansas State University undergraduate students were incentivized to complete the questionnaire through the offering of entrance into a drawing for ten, $50 cash prizes via a Google form at the end of the questionnaire. Funding for this incentive came from the 2023 Arts, Humanities and Social Sciences Small Grant Program. After the initial recruitment email, a total of 609 responses were received. A follow-up email (Appendix D) was also sent two days after the initial recruitment to Kansas State undergraduate students who had

not already completed the questionnaire. This follow-up email applied the previously mentioned principals in addition to emphasizing time to complete the questionnaire was limited and others had already completed the questionnaire (Dillman et al., 2014). Two days after the follow-up email, an announcement encouraging participation was included in K-State Today (Appendix E), the university's email newsletter. By the closing of the questionnaire, a total of ($n = 837$) responses were received.

When participants clicked on the questionnaire link from the initial email, follow-up email, or the K-State Today post, they were taken to the first questionnaire page containing a description of the study and consent related information, per Institutional Review Board protocol. To help prevent respondent dropouts, a message was given at the beginning of the questionnaire to indicate the estimated survey participation time (Wimmer & Dominick, 2014). Per the recommendations of Wimmer and Dominick (2014), the researchers limited the questionnaire completion length to no longer than 20 minutes. Consent for questionnaire participation was also established before a participant could begin the survey. If participants did not grant consent or were not of age to consent, they were sent to the end of the questionnaire. Participants were then presented questions following the instrument design (see figure 3.4). The questionnaire ended with a debriefing statement and the opportunity for participants to click on the link leading to the optional cash drawing Google Form. The debriefing statement thanked participants for their responses and informed them that the Instagram post they read was researcher created and that the U.S. Pork Association is fictional.

Data Analysis

After the data collection period ended, the data was exported from Qualtrics to Excel before being imported into SPSS to be further analyzed. The data was cleaned, and unusable or

incomplete responses were removed. Responses were considered unusable if the participant

completed the questionnaire too quickly, indicated they knew the person in the Instagram post

photo, or if they did not meet the sample parameters of being an undergraduate student at the

main campus of Kansas State University and over the age of 17. Of the 837 responses, 788

responses were deemed usable for analysis. After removing unusable and incomplete responses,

there were 266 participants in the control stimuli group, 254 participants in the celebrity stimuli

group, and 268 participants in the influencer stimuli group. Descriptive statistics were used to

describe the participants. To answer the research questions and hypothesis, ANCOVAs were

conducted. Demographics and individual difference variables were used as covariates during

analysis when appropriate.

Demographics

The majority of participants ($N = 788$) identified as female and accounted for 507

(64.34%) of the respondents while 262 (33.25%) were male, 15 (1.90%) were non-binary/third

gender, 4 (0.38%) preferred not to say, and 1 (0.13%) were other. The average age of

respondents was 20.42 ($SD = 2.89$) with a minimum age of 18 and a maximum age of 61.

Participants were asked to indicate the number of years they have completed toward their

undergraduate degree. A majority of participants ($n = 193$, 24.49%) indicated they had

completed three to four years. 191 (24.24%) indicated that they had completed two to three

years, 187 (23.73%) had completed less than one year, 183 (23.22%) had completed one to two

years, and 34 (4.31%) had completed over four years. These ranges were included because data

was collected near the beginning of a spring semester. In terms of academic rank, the largest

percentage of respondents ($n = 245$, 31.09%) were juniors, 193 (24.49%) were seniors, 176

(22.34%) were freshmen, and 174 (22.08%) were sophomores. Participants were from seven of

the eight academic colleges at Kansas State University. The most participants were from the College of Agriculture. Table 3.1 describes the participants per college.

Table 3.1 *Participants per College*

College	Frequency	Percent
Agriculture	205	26.02%
Arts and Sciences	194	24.62%
Carl R. Ice College of Engineering	154	19.54%
Health and Human Science	86	10.91%
Business Administration	83	10.53%
Education	41	5.20%
Architecture, Planning and Design	25	3.17%

Note. N = 788

Individual Difference Variables

Current behaviors for pork consumption, pork purchasing, and website visiting were measured during the instrument. When asked how often they consume pork, 264 (33.50%) reported eating pork *a few times per week*, 262 (33.25%) reported eating pork *less often* than once per week, 197 (25.00%) reported eating pork *once per week*, 31 (3.93%) reported *never* eating pork, 25 (3.17%) reported they eat pork *once a day*, and 9 (1.14%) reported eating pork *several times a day*.

When asked how likely they are to purchase a pork product when looking for a protein source, the greatest number of participants (*n* = 247, 31.35%) indicated they are *somewhat likely* to do so. Two hundred and thirty-three (29.57%) participants reported they were *somewhat unlikely* to purchase pork, 149 (18.91%) reported they were *neither likely nor unlikely*, 113 (14.34%) reported they were *very unlikely* to purchase pork, and 46 (5.84%) reported they were *very likely* to purchase pork.

When asked how likely they are to visit a website included in the "learn more" feature at the bottom of an Instagram post, 296 (37.56%) respondents reported they were *very unlikely* to visit a website through the "learn more" feature on an Instagram post, 252 (31.98%) respondents were *somewhat unlikely*, 134 (17.01%) were *somewhat likely*, 96 (12.18%) were *neither likely nor unlikely*, and 10 (1.27%) were *very likely*.

Social media use was measured through a series of questions related to participant's use of Instagram. Most participants (*n* = 728, 92.34%) indicated they had an Instagram account. When asked how often they open their Instagram account, a majority of participants (*n* = 490, 62.18%) open their Instagram account *several times a day*. Of the remaining participants, 105 (13.32%) open their account *once a day*, 72 (9.14%) *never* open their account, 72 (9.14%) open their account *a few times per week*, and 49 (6.22%) open their account *less often*.

Agricultural disposition was measured using five, five-point Likert scales. The fifth statement was reverse coded during analysis. Higher values indicate a stronger participant disposition toward agriculture (Hill et al., 2021). For the first statement, *I am involved in production agriculture*, the average response was 2.37 (*SD* = 1.59). For the second statement, *I am emotionally connected to the agriculture industry*, the average response was 3.00 (*SD* = 1.55). For the third statement, *I strongly identify with the agriculture industry*, the average response was 2.68 (*SD* = 1.58). For the fourth statement, *I trust the livestock production industry*, the average response was 3.65 (*SD* = 1.25). The fifth statement, *I have concerns about the safety of meat-based food products*, was reverse coded to match the scale. After reverse coding, the average response for the fifth statement was 3.29 (*SD* = 1.27). The sixth statement, *I believe livestock producers in the U.S. are dedicated to producing safe products*, the average response

was 3.91 (*SD* = 1.12). For each participant, the responses to each of the five items were averaged for a measure of individual agricultural disposition (*M* = 3.15, *SD* = 1.98).

Subjective norms were measured for pork consumption, pork purchasing, and website visiting on a scale from one to five. A higher value on the scale from one to five indicates participants felt their peers were more likely to also perform certain behaviors (Ajzen, 2006). For pork consumption, the average subjective norm was 4.23 (*SD* = 0.95). For pork purchasing, the average subjective norm was 3.95 (*SD* = 1.02). For website visiting, the average subjective norm was 2.82 (*SD* = 1.16).

Perceived behavioral control was measured for pork consumption, pork purchasing, and website visiting on a scale from one to five with higher values indicating participants felt they have more control over their ability to perform a behavior (Ajzen, 2006). The average perceived behavioral control for pork consumption was 4.82 (*SD* = 0.60). For pork purchasing, the average perceived behavioral control was 4.78 (*SD* = 0.58). The average perceived behavioral control for website visiting was 4.58 (*SD* = 0.82).

Endorsement susceptibility was measured through a series of questions. When asked if they follow an influencer on Instagram, a majority of participants (*n* = 498, 63.20%) indicated they did follow an influencer on Instagram. Of the remaining participants, (*n* = 224, 28.43%) indicated they did not follow an influencer and 66 (8.38%) were unsure. Participants were also asked if they have made any purchases based on the recommendation of an influencer. A majority of participants (*n* = 443, 56.21%) indicated that they have not purchased based on the recommendation of an influencer, while 280 (35.53%) indicated they had and 65 (8.25%) were unsure. When asked if they follow a celebrity on Instagram, a majority of participants (*n* = 592, 75.13%) indicated they follow a celebrity on Instagram, while 165 (20.94%) indicated they did

not follow a celebrity and 31 (3.93%) were unsure. Participants were also asked in they have

made any purchases based on the recommendations of celebrities. 528 (67.00%) of respondents

have not made a purchase based on the recommendation of a celebrity, 167 (21.19%) had made a

purchase based on the recommendations of a celebrity, and 93 (11.80%) were unsure.

Dependent Variables

The dependent variables measured in this study were attitudes, behavioral intention to

purchase a pork product, behavioral intention to visit a commodity organization website, and

source credibility.

Attitudes toward the Instagram post participants were exposed to was measured through

five seven-point semantic differential scales. Descriptive statistics were determined based on

attitudes across all condition groups for each of the subscales and overall. The higher the

number, the more positively participants attitudes toward the Instagram post were. For the

subscale of 1 = *unappealing* to 7 = *appealing*, the mean was 4.23 (SD = 1.65). For the subscale

of 1= *bad* to 7 = *good*, the mean was 4.49 (SD = 1.44). For the subscale of 1 = *unpleasant* to 7 =

pleasant, the mean was 4.60 (SD = 1.65). For the subscale of 1 = *unfavorable* to 7 = *favorable*,

the mean was 4.35 (SD = 1.51). For the subscale of 1 = *unlikable* to 7 = *likable*, the mean was

4.37 (SD = 1.58). Responses to the subscales were then averaged to determine the overall

attitudes toward the Instagram post participants viewed (M = 4.41, SD = 1.38), indicating

participants had slightly positive attitudes overall.

To determine participants' behavioral intention to purchase a pork product, participants

were asked to indicate their level of likelihood to purchase a pork product the next time they are

looking for a protein source after viewing the Instagram post. The majority of participants (n =

338, 42.89%) responded they were *neither likely nor unlikely* to purchase a pork product. Of the

remaining participants, 147 (18.65%) responded they were *somewhat unlikely*, 146 (18.53%) responded they were *somewhat likely*, 130 (16.50%) responded they were *very unlikely*, and 27 (3.43%) responded they were *very likely*. The overall average behavioral intention to purchase a pork product on a scale from one to five was 2.74 (*SD* = 1.05).

Behavioral intention to visit a commodity organization's website was measured through participants level of likelihood to visit the website through the "learn more" feature at the bottom of the Instagram post they viewed. The majority of the participants (*n* = 407, 51.65%) indicated they were *very unlikely* to visit the website. One hundred and eighty-two (23.10%) participants were *somewhat unlikely*, 104 (13.20%) were *neither likely nor unlikely*, 84 (10.66%) were *somewhat likely*, and 11 (1.40%) were *very likely*. The overall average behavioral intention to visit a commodity organization's website on a scale from one to five was 1.87 (*SD* = 1.09).

Perceived source credibility was measured through a series of subscales pertaining to the trustworthiness, expertise, and attractiveness of the person in the Instagram post they viewed. Each subscale had a score range from one to seven. These items were compiled to determine an average perceived source credibility score for each participant. Trustworthiness was measured as being *undependable* to *dependable*, *dishonest* to *honest*, *unreliable* to *reliable*, *insincere* to *sincere*, *untrustworthy* to *trustworthy*. For the subscale of trustworthiness, the average response was 4.37 (*SD* = 1.56). Expertise was measured as being *not an expert* to *expert*, *inexperienced* to *experienced*, *unknowledgeable* to *knowledgeable*, *unqualified* to *qualified*, and *unskilled* to *skilled*. For the subscale of expertise, the average response was 3.31 (*SD* = 1.42). Attractiveness was measured as being *unattractive* to *attractive*, *not classy* to *classy*, *ugly* to *beautiful*, *plain* to *elegant*, and *not sexy* to *sexy*. For the subscale of attractiveness, the average response was 4.88 (*SD* = 1.08). The overall average score for perceived source credibility was 4.18 (*SD* = 1.07).

Summary

This chapter presented methods and procedures used for a between-subjects experiment research design developed based on Multi-Step Flow Theory, opinion leadership, and the Theory of Planned Behavior. The independent variables for this study were type of endorsement (celebrity and influencer). The dependent variables were consumer attitudes, consumer behavioral intention to purchase a commodity product (pork), consumer behavioral intention to visit a commodity organization's (U.S. Pork Association) website, and perceived source credibility. The quantitative experiment (Figure 3.4) was completed through Qualtrics by Kansas State University undergraduate students on the Manhattan, Kansas campus.

Participants were asked questions pertaining to demographics and individual difference variables questions. They were also exposed to a description and a mock Instagram post for one of the randomly assigned endorsement types and video distractor before being asked dependent variable questions. Data collected during this study will be presented in the next chapter and were analyzed using ANCOVAS. Data analysis was conducted using SPSS.

Chapter 4 - Results

Overview

This chapter presents the results of the experimental between-subjects research design questionnaire used in this research study, which tested the independent variable of endorser type's impact on the dependent variables of consumer attitudes, consumer behavioral intention to purchase a commodity product (pork), consumer behavioral intention to visit a commodity organization's (U.S. Pork Association) website, and perceived source credibility. Data was collected and analyzed to meet the following research questions and hypothesis:

Research Questions

1. How does the type of endorsement impact consumer attitude toward an endorsement used by commodity organizations?

2. How does the type of endorsement impact consumer intention to purchase a commodity product?

3. How does the type of endorsement impact consumer intention to visit a commodity organization's website?

Hypothesis

1. An influencer endorser will be perceived as being more credible compared to a celebrity endorser.

Research Question One

To investigate consumers' attitudes toward celebrity and influencer endorsements used by commodity organizations, a one-way ANCOVA was conducted to see if there was a statistically significant difference between exposure to the celebrity, influencer, or control endorsements on attitudes. The covariates in this analysis were gender, Instagram use frequency,

and agricultural disposition. These covariates were included because of the known effect of gender on response to an endorsement and their relevancy to the contexts of this study (Hudders & De Jans, 2021). Analysis was guided by Field (2017) and Laerd Statistics (2017). Independent ANOVA analyses were conducted to ensure independence of all covariates and the treatment effect. The assumption of homogeneity of regression slopes was evaluated and met. Under the central limit theorem, large samples will have a normal distribution, meeting the assumption of normality (Field, 2017). There was homoscedasticity, as assessed by the visual inspection of the standardized residuals plotted against the predicted values. There was homogeneity of variances, assessed by Levene's test of homogeneity of variance ($p = .251$). There was an outlier in the data, as assessed by standardized residuals ± 3 standard deviations. The researcher decided to keep the outlier in the analysis after comparing the results with and without the outlier. Removal of the outlier did not result in a change of the outcome of the ANCOVA (Laerd, 2017).

Adjusted means are presented from the results of the ANCOVA. Attitudes toward the endorsement were greater in the control group ($M = 4.51$, $SE = 0.08$) compared to the influencer group ($M = 4.37$, $SE = 0.80$) and the celebrity group ($M = 4.34$, $SE = 0.08$), respectively. After adjustment for gender, Instagram use frequency, and agricultural disposition, there was not a statistically significant difference in attitudes between the interventions, $F(2, 782) = 1.22$, $p = .296$, partial $\eta^2 = .003$. The inferential statistics reported for this ANCOVA are shown in Table 4.1.

Table 4.1 *Analysis of Covariance of Attitudes Toward the Endorsement, with Individual*

Difference Variable as Covariates

Source	df	SS	MS	F	p	η^2
Endorsement Type	2	4.13	2.06	1.22	.296	.003
Covariates						
Gender	1	4.45	4.45	2.63	.106	.003
Instagram frequency	1	1.45	1.45	0.86	.354	.001
Agricultural disposition	1	162.28	162.28	95.83	<.001	.109
Error	785	1324.25				
Total	788	16818.16				

Note. N = 788

Research Question Two

A one-way ANCOVA was conducted to determine if there was a statistically significant difference between exposure to the celebrity, influencer, or control endorsement on behavioral intention to purchase a commodity product. Participants (*n* = 20) who indicated they had medical or religious beliefs preventing them from consuming pork were removed from the analysis. The covariates in this analysis were gender, Instagram use frequency, current pork consumption, pork consumption perceived behavioral control (PBC), pork consumption subjective norm, current pork purchasing likelihood, pork purchasing perceived behavioral control (PBC), and pork purchasing subjective norm. These covariates were included because of their impact on response to an endorsement (Hudders & De Jans, 2021), relevancy to the context of this study, and known impact on behavioral intention (Ajzen, 1991). Analysis was guided by Field (2017) and Laerd Statistics (2017). Independent ANOVA analyses were conducted to ensure independence of all covariates and the treatment effect. The assumption of homogeneity of regression slopes was evaluated and met. Under the central limit theorem, large samples will have a normal

distribution, meeting the assumption of normality (Field, 2017). There was homoscedasticity, as assessed by the visual inspection of the standardized residuals plotted against the predicted values. There was homogeneity of variances, assessed by Levene's test of homogeneity of variance ($p = .967$). There were four outliers in the data, as assessed by standardized residuals $\pm$ 3 standard deviations. The researcher decided to keep the outliers in the analysis after comparing the results with and without the outliers. Removal of the outliers did not result in a change of the significance outcome of the ANCOVA (Laerd, 2017).

Adjusted means are presented from the results of the ANCOVA. Behavioral intention to purchase a pork product was highest in the influencer group ($M = 2.90$, $SE = 0.05$) compared to the celebrity group ($M = 2.74$, $SE = 0.05$) and control group ($M = 2.72$, $SE = 0.05$). After adjustment for gender, Instagram use frequency, current pork consumption, pork consumption perceived behavioral control (PBC), pork consumption subjective norm, current pork purchasing likelihood, pork purchasing perceived behavioral control (PBC), and pork purchasing subjective norm, there was not a statistically significant difference in behavioral intention to purchase a pork product between the interventions, $F(2, 757) = 0.76$, $p = .466$, partial $\eta^2 = .002$. The inferential statistics reported for this ANCOVA are shown in Table 4.2.

Table 4.2 *Analysis of Covariance of Behavioral Intention to Purchase a Pork Product, with Individual Difference Variables as Covariates*

Source	df	SS	MS	F	p	η²
Endorsement Type	2	1.04	0.52	0.76	.466	.002
Covariates						
Gender	1	4.95	4.95	7.28	.007	.010
Instagram frequency	1	2.22	2.22	3.26	.071	.004
Current pork consumption	1	12.25	12.25	18.00	<.001	.060
Pork consumption PBC	1	3.42	3.42	5.02	.025	.007
Pork consumption subjective norm	1	3.26	3.26	4.78	.029	.006
Current pork purchasing	1	114.30	114.30	168.01	<.001	.182
Pork purchasing PBC	1	1.14	1.14	1.67	.197	.002
Pork purchasing subjective norm	1	764				
Error	758	515.02				
Total	768	6641.00				

Note. N = 768

Research Question Three

A one-way ANCOVA was conducted to determine if there was a statistically significant difference between the exposure to the celebrity, influencer, or control endorsement on behavioral intention to visit a commodity organization website. The covariates in this analysis were gender, Instagram use frequency, current website visiting, website visiting perceived behavioral control, and website visiting subjective norm. These covariates were included because

of their impact on response to an endorsement (Hudders & De Jans, 2021), relevancy to the context of this study, and known impact on behavioral intention (Ajzen, 1991). Analysis was guided by Field (2017) and Laerd Statistics (2017). Independent ANOVA analyses were conducted to ensure independence of all covariates and the treatment effect. The assumption of homogeneity of regression slopes was evaluated and met. Under the central limit theorem, large samples will have a normal distribution, meeting the assumption of normality (Field, 2017). There was homoscedasticity, as assessed by the visual inspection of the standardized residuals plotted against the predicted values. There was homogeneity of variances, assessed by Levene's test of homogeneity of variance ($p = .594$). There were three outliers in the data, as assessed by standardized residuals $\pm$ 3 standard deviations. The researcher decided to keep the outliers in the analysis after comparing the results with and without the outliers. Removal of the outliers did not result in a change of the significance outcome of the ANCOVA (Laerd, 2017).

Adjusted means are presented from the results of the one-way ANCOVA. Behavioral intention to visit a commodity organization website was highest in the celebrity group ($M = 1.91$, $SE = 0.06$) compared to the influencer group ($M = 1.85$, $SE = 0.06$) and control group ($M = 1.85$, $SE = 0.06$). After adjustment for gender, Instagram use frequency, current website visiting, website visiting perceived behavioral control, and website visiting subjective norm, there was not a statistically significant difference in behavioral intention to visit a commodity organization website between the interventions, $F(2, 780) = 0.31$, $p = .733$, partial $\eta^2 = .001$. The inferential statistics reported for this ANCOVA are shown in Table 4.3.

Table 4.3 *Analysis of Covariance of Behavioral Intention to Visit a Commodity Organization*

Website, with Individual Difference Variables as Covariates

Source	df	SS	MS	F	p	η^2
Endorsement Type	2	0.56	0.28	0.31	.733	.001
Covariates						
Gender	1	1.66	1.66	1.84	.176	.002
Instagram frequency	1	0.18	0.18	0.20	.655	.000
Current website visiting	1	104.27	104.27	115.33	<.001	.129
Website visiting PBC	1	0.02	0.02	0.03	.870	.000
Website visiting subjective norm	1	24.69	24.69	27.31	<.001	.034
Error	781	705.15				
Total	788	3690.00				

Note. N = 788

Hypothesis One

A one-way ANCOVA was conducted to determine if there was a statistically significant difference between the exposure to the celebrity, influencer, or control endorsement on the perceived credibility of celebrity and influencer endorsements used by a commodity organization. The covariates in this analysis were gender, Instagram use frequency, and agricultural disposition. These covariates were included because of the known effect of gender on response to an endorsement and their relevancy to the contexts of this study (Hudders & De Jans, 2021). Analysis was guided by Field (2017) and Laerd Statistics (2017). Independent ANOVA analyses were conducted to ensure independence of all covariates and the treatment effect. The assumption of homogeneity of regression slopes was evaluated and met. Under the

central limit theorem, large samples will have a normal distribution, meeting the assumption of normality (Field, 2017). There was homoscedasticity, as assessed by the visual inspection of the standardized residuals plotted against the predicted values. There was homogeneity of variances, assessed by Levene's test of homogeneity of variance ($p = .070$). There were three outliers in the data, as assessed by as assessed by standardized residuals ± 3 standard deviations. The researcher decided to keep the outliers in the analysis after comparing the results with and without the outliers. Removal of the outliers did not result in a change of the significance outcome of the ANCOVA (Laerd, 2017).

Adjusted means are presented from the results of the one-way ANCOVA. Perceived source credibility was highest in the control group ($M = 4.41$, $SE = 0.06$) compared to the celebrity group ($M = 4.07$, $SE = 0.06$) and influencer group ($M = 4.07$, $SE = 0.06$). After adjustment for gender, Instagram use frequency, and agricultural disposition, there was a statistically significant difference in perceived source credibility between the interventions, $F(2, 782) = 9.48$, $p < .001$, partial $\eta^2 = .024$. The inferential statistics reported for this ANCOVA are shown in Table 4.4.

Table 4.4 *Analysis of Covariance of Perceived Source Credibility, with Individual Difference Variables as Covariates*

Source	df	SS	MS	F	p	η^2
Endorsement Type	2	19.82	9.91	9.48	<.001	.024
Covariates						
Gender	1	2.91	2.91	2.78	.096	.004
Instagram frequency	1	3.54	3.54	3.39	.066	.004
Agricultural disposition	1	51.93	51.93	49.69	<.001	.060
Error	783	817.28				
Total	788	14689.97				

Note. N = 788

Post hoc analysis was performed with a Bonferroni adjustment. Perceived source credibility was statistically significantly greater in the control group vs the celebrity group (M_{diff} = 0.33, 95% CI [.12, .55], $p <.001$) and the influencer group (M_{diff} = 0.34, 95% CI [.13, .55], $p <.001$). The hypothesis that the influencer endorser would be perceived as being more credible compared to the celebrity endorser was rejected.

Summary

Data analysis of $N = 788$ usable responses was conducted using SPSS. For each of the research questions and the hypothesis, ANCOVAs were utilized to determine if there were differences between treatment groups while controlling for covariates within the groups that could impact results. The results for each research question and hypothesis will be further assessed and recommendations for practice and future research will be provided in the next chapter.

Chapter 5 - Conclusions, Discussions, Recommendations

Overview

This chapter discusses the findings of this research study as they relate to the past literature and theories highlighted in chapter two and the results detailed in chapter four. Based on the study findings, this chapter also discusses future research recommendations. The findings of this study aim to increase the understanding of the effectiveness of celebrity endorsements and influencer marketing in an agriculture and food context. The conclusions, discussions, and recommendations given in this chapter are guided by the following research questions and hypothesis:

Research Questions

1. How does the type of endorsement impact consumer attitude toward an endorsement used by commodity organizations?

2. How does the type of endorsement impact consumer intention to purchase a commodity product?

3. How does the type of endorsement impact consumer intention to visit a commodity organization's website?

Hypothesis

1. An influencer endorser will be perceived as being more credible compared to a celebrity endorser.

General Findings from the Population Surveyed

The population surveyed in this study, undergraduate Kansas State students of the Manhattan, Kansas campus, is relevant to commodity organizations, specifically those promoting meat products, because of their growing market power (Fontein, 2019) and their high meat

consumption (Daniel et al., 2011). Most meat consumption occurs for individuals between 20 and 49 years of age (Daniel et al., 2011), making most of the participants of this study approaching or in their peak meat consumption age range. Of these participants, most are eating pork a few times a week or less often. When looking to consume a protein source, participants were largely neutral about choosing a pork product. Therefore, there is potential and a need for increasing interest, purchasing, and consumption of pork within this population.

When considering pork consumption and purchasing of respondents, it is also worth highlighting their perceived behavioral control and subjective norms. The Theory of Planned Behavior posits perceived behavioral control and subjective norm can have varying importance on behavioral intention (Ajzen, 1991). Overall, the average perceived behavioral control for pork consumption suggests participants felt they had a good amount of control over consuming pork if they wanted to. The overall average perceived behavioral control for pork purchasing was slightly lower than for reported pork consumption. This average could be lower than the pork consumption perceived behavioral control average because participants reported being unable to purchase pork due to its cost. There were also participants who had a meal plan through Kansas State University and were not responsible for purchasing due to that reason. Subjective norm for pork consumption showcased participants felt there was a high likelihood their peers were also consuming pork. However, the average overall subjective norm for pork purchasing was lower than for pork consumption. Participants felt there was less of a likelihood that their peers were purchasing pork than consuming it. While not a primary objective of this study, future studies pertaining to motivations and barriers to pork consumption and purchasing should investigate the found difference in pork consumption and pork purchasing subjective norms.

Based on previous research, males have a greater purchase intention than females as a result of a female celebrity endorsement (Liu & Brock, 2011). However, females prefer female celebrity endorsers while males were not found to have as much of a preference (Klaus & Bailey, 2008). Therefore, some researchers recommend using a female celebrity endorser when trying to reach a wider audience (Klaus & Bailey, 2008). Nearly two-thirds of student respondents were female, which aligned well with the female endorser used in this study, but gender was still controlled for in data analysis. Future studies related to endorsements in agriculture could explore matching endorser gender identity to participant gender identity.

Celebrity endorsements and influencer marketing can influence purchasing intention (Bergkvist & Zhou, 2016; Marketing Accountability Standards Board, n.d.). Most of the study participants were following an influencer and/or celebrity. Because they are following influencers and celebrities, they are most likely seeing endorsements from influencers and/or celebrities often in their social platform feeds. However, more than half of participants have not made a purchase based on the recommendation of an influencer and/or a celebrity. Of those who have made such a purchase, most participants did so because of an influencer. These findings might indicate the purchasing of products by this population is more likely to be because of an influencer than a celebrity, a finding in agreeance with Djafarova & Rushworth (2017), Jin et al. (2019), and Schouten et al. (2020). Future studies could elaborate on what types of celebrities and influencers are leading to the greatest purchase intention in this population.

Discussion of the Research Questions and Hypothesis

Research Question One

There was not a statistically significant difference in attitudes toward the endorsement among the treatment groups, suggesting participants did not have differing attitudes toward the

endorsement based on the endorsement type. This lack of difference in attitudes based on the endorsement types, confirms the findings of Schouten et al. (2020).

After considering individual difference variables, attitude toward the endorsement was the most positive for the control group compared to the influencer group and the celebrity group. All the attitudinal mean scores were greater than average, meaning the participants in this study did not have a negative attitude toward any of the endorsements they viewed. This is a positive result because it means endorsements on Instagram do not result in negative attitudes; therefore, they do not do more harm than good. A study conducted in China on livestream shopping for agricultural products found celebrity endorsement had a positive impact on attitudes and purchasing intention (Yu & Zhang, 2022). While the study conducted by Yu and Zhang (2022) did not compare endorsement types, the findings of this study support their conclusion that positive attitudes are present toward a celebrity endorsement of agricultural products. Other studies have also confirmed this finding in other product categories (Rahmen et al., 2021). For this study, attitudes toward the endorser and endorsement did not serve as a mediator in any of the statistical analyses. Future research could consider how attitudes toward an endorsement of a commodity product impact purchasing behaviors of consumers.

Considering celebrities and influencers are known opinion leaders (Wood & Herbst, 2007; Farivar et al., 2021), the overall positive attitudes toward all the endorsers used in this study adds to the concept of opinion leadership. Respondents felt positively about the interpersonal communication portion of the opinion leadership process, one of the crucial components of most individuals' decision-making process (King & Summers, 1970). Future research should explore how interpersonal communication can be optimized to exert more

influence on future behavior in the context of influencing consumer decisions surrounding commodity products.

Research Question Two

There was not a statistically significant difference in behavioral intention to purchase a pork product among the treatment groups, suggesting the endorsement type did not impact behavioral intention to purchase pork in the future. This result signals that under the parameters of this study, there might be reason to further investigate if influencers result in greater purchase intention than celebrities or other endorsers. Unlike in previous studies comparing influencers and celebrities (Schouten et al., 2020; Djafarova & Rushworth, 2017; Jin et al., 2019), we were unable to be confirm purchase intention was higher for the influencer than the celebrity. Even though this is a contradicting finding, more research is needed to understand if this finding holds true under different scenarios. Future research should explore this research question with different commodity products, real-life influencers and celebrities, different messaging, and on the Instagram platform.

When participants' post stimuli pork purchasing behavioral intention likelihood was measured, most responded with indifference towards purchasing a pork product. This signifies none of the endorsements resulted in a meaningful behavioral intention change in participants. People can distinguish if endorsements from influencers are genuine and if brand relationships are sincere (Chopra et al., 2020). Dwivedi et al. (2015) also recommended practitioners choose a well-aligned celebrity for their brand for greater success. It is possible participants did not feel the endorsement brand relationship was sincere for any of the endorsement types. Future research should emphasize establishing a relationship between the agricultural product and the

endorser to see if there can be increased success in increasing purchasing intention when there is a clear relationship.

Opinion leadership has been extended in the digital age to celebrities and influencers (Wood & Herbst, 2007; Farivar et al., 2021). They have been found to affect purchasing decisions based on their support of a brand and their products (Chaudry & Irshad, 2013). We propose our participants did not view the celebrity and influencer endorser as an opinion leader, therefore, the information being transmitted was not influential to the study participants. It is possible the participants did not feel the endorsers in the manipulation had the perceived expertise, confidence, or leadership needed to be viewed as an opinion leader (Farivar et al., 2021). Research in opinion leadership has emphasized that opinion leaders can be general opinion leaders or experts in a few specific fields (Merton, 1949). When trying to impact pork or related product purchasing decisions, opinion leaders that are experts in a few specific fields may have more influence. Overall, our findings support the specific opinion leader side of the generalized versus specific paradigm in opinion leader research.

Within the Theory of Planned Behavior, individuals must be motivated to perform a certain behavior (Ajzen, 2012). Opinion leaders could serve as a motivator as they exert influence (King & Summers, 1970). In our experiment, it does not seem that the celebrity and influencer endorser served as enough of a motivating opinion leader to change behavioral intention.

Research Question Three

There was not a statistically significance in behavioral intention to visit a commodity organization website among the treatment groups, suggesting endorsement type did not impact behavioral intention to visit the website in the Instagram post viewed. Across the three

endorsement types, participants were not interested in visiting commodity organization websites when linked to Instagram posts. The messaging with the post could have not been enticing enough to drive the behavioral intention. Future research should implement message testing as a separate test before implementing an experimental design. Expanding the research to include more pretests could lead to different results on website visiting intention.

Data analysis revealed participants did not report visiting a website from an Instagram post was a subjective norm, a behavior their peers would commonly do. However, participants did report perceived behavioral control over website visiting, meaning they felt they could do so if they wanted to. Theory of Planned Behavior suggests perceived subjective norms and behavioral control are two determinants of intention (Ajzen, 1991). These two determinants can vary in their impact on behavioral intention (Ajzen, 1991). For the behavioral intention of visiting a commodity organization website, the results suggest subjective norm might have had a greater impact on the behavioral intention than perceived behavioral control. Chopra et al. (2021) found attitude and perceived behavioral control impact consumer behavior in influencer marketing. Additionally, Chetioui et al. (2019) found in addition to other factors, perceived behavioral control and subjective norms significantly impact consumer attitudes and purchase intention. Previous literature and the results of this study support Ajzen's (1991) belief that perceived behavioral control and subjective norm have varying impacts on behavioral intention in different situations under the Theory of Planned Behavior. We propose in the context of endorsements encouraging website visiting, subjective norms had a greater impact on consumer behaviors than perceived behavioral control. This conclusion has theoretical relevance to the Theory of Planned Behavior as it supports prior foundations of the theory.

Hypothesis One

There was a statistically significant difference in perceived source credibility among the treatment groups, suggesting the endorsement type did influence how participants perceived the credibility of the endorser. Surprisingly, the endorsement type with the greatest, significant perceived source credibility was the control condition. This contradicts the hypothesis developed from previous literature that the influencer endorser would be more credible than the celebrity endorser. Findings suggest celebrity and influencer endorsements in the context of this study did not have a significant impact on perceived source credibility. Furthermore, when the endorser was not identified as either an influencer or celebrity, the participants perceived them as being more credible.

Contradictory to the results of this study, Schouten et al. (2020) and Jin et al. (2019) found influencers to be more trustworthy than celebrities. While our study did not evaluate the differences between the groups based on the subscales of trustworthiness, expertise, and attractiveness, the confirmed Cronbach's alpha for the perceived source credibility scale suggests each of the scales contribute similarly to perceived source credibility. With these considerations, our results showed the control condition had greater trustworthiness and source credibility than both influencers and celebrities. These findings do not align with prior studies which found perceived source credibility to be greater for influencers (Djafarova & Rushworth, 2017; Jin et al., 2019; Schouten et al., 2020).

There is a need to better understand why the control endorser was deemed as having greater source credibility than the influencer or celebrity. This finding might suggest the influencer and celebrity portrayed in this study were not viewed by the participants as being someone that is credible in endorsing a meat product. Future research might allow for the

elaboration on this idea through qualitative research, including interviews and focus groups, to better understand why respondents found the control credible and what type of endorser might work best for commodity organizations in terms of the flow of communication from the commodity organization to an endorser to a consumer. In the context of commodity organizations influencing consumer behavior, celebrity and influencer endorsers might not be seen as the most credible type of endorser for the sample studied.

One possible explanation for the control endorsement having a greater perceived source credibility than the celebrity or influencer endorser is how the control endorser was portrayed. In the description before the control stimuli, it was mentioned that the person in the image often cooks. While not intended, the results of this research question might have inadvertently supported the previously mentioned conclusion from the discussion of the second research question that specific opinion leaders who are considered experts in the contexts of this study might be more persuasive. As determined by opinion leadership research, opinion leaders can be generalized or specific (Merton, 1949). The control endorser might have been viewed as more credible due to them appearing to be more specific to the study's context.

Implications and Recommendations

Practice

The goals of commodity organizations are to increase demand for their commodities (Forker & Ward, 1993) and improve consumers' understanding of agriculture (Hughes et al., 2016). In respect to the first goal, the findings of this study suggest that influencer and celebrity endorsements do not differ in their effectiveness of increasing purchasing intention. Across the influencer, celebrity, and control conditions, a majority of participants said they were neither likely nor unlikely to purchase a pork product after viewing the Instagram post with an

endorsement. When considering the role of the Theory of Planned Behavior in behavioral intention such as purchasing pork, it would be beneficial to investigate the motivations and barriers to pork consumption and purchasing as well as the found difference in pork consumption and purchasing subjective norms. Additionally, as commodity organizations use celebrity and influencer endorsements on Instagram, the messaging of the Instagram posts could be an important component in purchasing intention. Message testing could help with alleviating this uncertainty. Furthermore, having the endorsement originate from the Instagram account of the endorser could change the effectiveness outcome, as determined by Lou et al. (2019).

This study also investigated the comparative effectiveness of celebrity endorsements and influencer marketing in meeting the commodity organization goal of consumer education. While social media platforms like Instagram can allow for the opportunity for organizations to drive traffic to their website (Killian & McManus, 2015), it was also found that the endorsements in this study did not encourage the behavioral intention of website visiting. As commodity organizations design marketing and communications plans, this study might suggest efforts to educate about a commodity might be better suited on the social media platform rather than trying to drive traffic to a website to learn more. Education on the social media platform might take the form of a campaign of educational posts about a commodity product. Additionally, efforts to educate consumers might be best done through the use of informer influencers, who provide educational content based on their expertise, or infotainer influencers, who inform in entertaining way (Gross & Wangenheim, 2018). Because improving consumers' understanding of agriculture is an important goal of agriculture, there is a warranted need to better understand the effectiveness of celebrity and influencer marketing in helping bridge the knowledge gaps between the agricultural industry and consumers.

Influencers and celebrities were not viewed as being as credible as a non-descript person. This should be taken into consideration when commodity organizations are determining their communication efforts. If a non-descript person is viewed as being more credible, commodity organizations might benefit from working on increasing promotions using user-generated content from pork consumers. This content would be created by regular individuals who are not incentivized to create this content, which appears to be more credible to those who participated in the study.

Agricultural Communications

Research surrounding celebrity and influencer marketing is limited in the field of agricultural communications (Powell, 2022). Research on celebrity endorsers in the context of food and agriculture primarily emphasizes celebrity endorsements for highly processed food and beverages (Zhou et al., 2020) and scenarios outside of the U.S. (Yu & Zhang, 2022). The research that is available on influencer marketing in the context of food and agriculture focuses on the impact of influencers on the health of children (Coates et al., 2019), dairy industry influencers (Neves, 2021), and the current influencer partnerships checkoff programs have (Powell, 2022). This study fills a gap in the literature concerning the effectiveness of celebrities and influencers in impacting consumer behavior. Continued research with this focus is necessary. While commodity organizations are partnering with celebrities and influencers, this study found that the potential positive impacts of these partnerships seen in other industries might be different in agricultural commodity marketing.

Based on the results of this study and prior literature, it is recommended that the field of agricultural communications place emphasis on the investigation of influencer marketing and its use, effectiveness for improving attitudes and driving behavior change, and implications of such

on the agricultural industry. As found in other industries, influencer marketing can serve multiple purposes, including increased purchasing of products and sharing key organizational messaging (American Marketing Association, n.d.b.). Key organizational messaging in the case of commodity organizations might consist of consumer education about a commodity (Hughes et al., 2016). Agricultural communicators need to better understand the nuances of how the purpose of an influencer marketing campaign, such as increasing product demand or sharing organizational messaging for the agricultural industry, impacts the type of influencer needed and the messaging that should come with the endorsement. Understanding these nuances and the best practices when trying to address the different, but connected, intentions will help maximize agricultural communications efforts and hopefully better meet commodity organization and overall agricultural industry goals.

Limitations and Recommendations for Future Research

Participants in this study were limited to Kansas State University undergraduate students. While this population was selected due to their meat consumption and susceptibility to influencer marketing, future research should look at the effectiveness of celebrity endorsements and influencer marketing for wider populations and those who different pork consumption and purchasing habits. This recommendation is based on the responses from participants indicating they did not have the control to pick their meat product based on their dining situation or they lacked the financial means to purchase pork.

When considering this population, future studies should elaborate on what types of celebrities and influencers would lead to greater purchase intention. For this study, the celebrity endorser was an actress and model due to their common occurrence in celebrity endorsements (Belch & Belch, 2013). The influencer endorser was a social media beauty influencer and

blogger. A beauty influencer was selected to maintain consistency with the celebrity endorser and due to their high reach to consumers (Santora, 2022). The influencer endorser was also identified as a blogger because it is a common influencer type used by commodity organizations (Powell, 2022). However, the influencer type not being more specific to this study and as well aligned with the organization and product could have impacted participants' responses to the influencer endorsement (Rosengren & Campbell, 2021; Kim & Kim, 2021). Future research should closely consider a more appropriate influencer type when it comes to influencing food behaviors such as a food blogger and influencer. Additionally, while females have been established as the best all-around endorser (Klaus & Bailey, 2008), future research should confirm if female or male endorsers result in different outcomes or if same gender alignment would impact what was found in this study.

For each stimulus, the Instagram post appeared to come from the mock organization, the U.S. Pork Association. Each post came from the same account for consistency as well as it being common for celebrity and influencer-generated content to be posted on the partnering organization's account (Lou et al., 2019) and posts containing humans from an organization's account still initiating trustworthiness and parasocial interaction (Jin et al., 2021). One study found influencer-promoted advertisements, posted on an influencer's account, had higher engagement rates in the form of increased likes and comments than the same advertisement posted on a brand's social media account (Lou et al., 2019). In addition to the known impact on engagement, it is possible participants viewed the stimuli and endorsers differently in terms of credibility and attitudes because it was from an organization account that might have been viewed as being an official and trustworthy account (Haley, 1996). Future research should

continue exploring the impact of celebrity and influencer-generated content coming from the organization account compared to an endorser account because the full impact is not yet known.

For the dependent variable of perceived source credibility, three potential dimensions of source credibility – trustworthiness, expertise, and attractiveness -- were selected due to their well-established inclusion in celebrity endorsement and influencer marketing literature (Ohanian, 1990; Spry et al., 2011). Future research on endorsements should continue to establish studies containing the other source credibility dimensions such as likability and similarity (Bergkvist & Zhou, 2016; Munnukka et al., 2016). These dimensions have the potential to be especially important to influencer marketing (Bergkvist & Zhou, 2016). Another limitation of this study was how expertise was measured during the questionnaire. When measuring the expertise of a celebrity or influencer endorser in future research on perceived source credibility, the specific expertise being measured should be explicitly stated in the expertise scale. For example, the expertise related to the job of the influencer (being a beauty influencer) might be viewed differently by participants than the expertise related to promoting pork purchasing. Measuring specific expertise is especially important when trying to target the use of specific opinion leaders rather than generalized opinion leaders in the context of the study. While outside of the scope of this study, it also would be beneficial to establish the potential mediating relationship of the dependent variables of attitudes toward the endorsement and perceived source credibility on purchasing behavioral intention and website visiting behavioral intention.

Future research would be best suited on the Instagram platform as this would allow for a better indication of potential effectiveness as it would allow for the scenarios to be more real life. The researcher also recommends expanding research pertaining to influencer marketing in agriculture to a qualitative research method. Through qualitative research, researchers might be

able to determine and further elaborate on why the non-descript person was viewed as more credible. Using a qualitative research method might also allow for a better understanding of how consumers respond to food related messaging in the influencer marketing context. No research has indicated what type of influencer would be best suited for influencing food-related decisions to consumers in general or, more specifically, the demographic used in this study.

Because of lack of access to an image containing a real-life influencer or celebrity for this specific study, the image used in the Instagram post for the manipulation of this study was researcher generated. Future research should be conducted using real-life individuals which might have greater relevancy to the populations of future studies. If this current limitation were to be overcome, researchers might be able to better evaluate celebrity endorsements and influencer marketing for agricultural purposes. Alongside using real-life celebrities and influencers, pretests should focus on fine tuning the messaging included through the caption and the description of the endorsement. A clear relationship between the commodity product and the endorser should also be developed through the manipulation.

When applying Theory of Planned Behavior to celebrity endorsement and influencer marketing research in the future, we recommend applying the entire planned behavior theoretical model, including the evaluation of participants attitude toward the specific behavior in question. We also recommend evaluating the role of opinion leadership in subjective norms and attitudes toward the behavior. If the role of opinion leadership is determined in these behavioral intention factors, it might be possible to better predict future behaviors.

The current study placed more emphasis on opinion leadership than Multi-Step Flow Theory. However, the flow of communication still has relevance to celebrity endorsements and influencer marketing and their application in food and agriculture (Burke, 2017). When applying

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Multi-Step Flow Theory to celebrity endorsement and influencer marketing research in the future, qualitative interviews should investigate the routes of communication flow from media or organizations to consumers to better understand how Multi-Step Flow Theory applies to today's society in the food and agricultural context.

As opinion leadership experiences a resurgence in importance (Mutz & Young, 2011), research should further explore how interpersonal communication in the digital age can be optimized with messaging that results in deeper processing of the exchange to increase personal influence on behavior (King & Summers, 1970). Improving interpersonal communication such as the messaging previously mentioned in this section could make for greater significance in altering future behaviors. In addition to emphasis on interpersonal communication, we recommend future research explore how specific opinion leaders can better serve contexts like ours.

Final Thoughts

Research is agricultural communications and other related fields has not yet explored the full potential of influencer marketing for the agricultural industry. There is current evidence of commodity organizations using both influencers and celebrities. Future research in this area should facilitate the collaboration of researchers in the agricultural communications field and practitioners in commodity organizations. We believe this partnership would allow for the most realistic measurement of the potential effectiveness of celebrity endorsements and influencer marketing in agriculture.

This study joins Neves (2021) and Powell (2022) in building a foundation of research and literature surrounding the use of influencer marketing in the agricultural industry. It also joins the limited literature comparing celebrity endorsements and influencer marketing. We answered the

research questions and evaluated the hypothesis by determining that in our sample and context of our study (1) positive attitudes toward celebrity and influencer endorsements were not significantly different, (2) the type of endorsement did not impact consumer intention to purchase a commodity product, (3) the type of endorsements did not impact consumer intention to visit a commodity organization's website, and (4) the perceived source credibility was statistically significantly different between the endorsement types with the control endorsement having a statistically significantly higher perceived source credibility than the celebrity endorser and the influence endorser. The findings of this study contribute to the literature by calling into question the effectiveness of influencer marketing compared to other endorsement types in a food and agriculture context, an area of research that should continue to be explored.

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Appendix A - Institutional Review Board Approval

KANSAS STATE | University Research
U N I V E R S I T Y | Compliance Office

TO: Nellie Hill
        Communications & Ag Education

FROM: Lisa Rubin, Chair
        Committee on Research Involving Human Subjects

DATE: 02/01/2023

RE: Proposal #IRB-11462, entitled "Celebrity vs. Influencer Endorsements: How
        Commodity Organizations Can Influence Consumer Behavioral Intention."

        MODIFICATION OF IRB PROTOCOL #IRB-11462, ENTITLED, "Celebrity vs.
        Influencer Endorsements: How Commodity Organizations Can Influence Consumer
        Behavioral Intention"

        EXPIRATION DATE: Exempt

The Committee on Research Involving Human Subjects (IRB) has reviewed and approved the
request identified above as a modification of a previously approved protocol. **Please note that
the original expiration remains the same.**

All approved IRB protocols are subject to continuing review at least annually, which may
include the examination of records connected with the project. Announced in-progress reviews
may also be performed during the course of this approval period by a member of the University
Research Compliance Office staff.   Unanticipated adverse events involving risk to subjects or to
others must be reported immediately to the Chair of the IRB, and / or the URCO

It is important that your human subjects activity is consistent with submissions to funding /
contract entities. It is your responsibility to initiate notification procedures to any funding /
contract entity of any changes in your activity that affects the use of human subjects.

Appendix B - Qualtrics Questionnaire

Study Intro/Consent

Information About This Study

What is this research studying?
This study will help to increase the understanding of celebrities and influencers used in agriculture. The research findings will be used to inform future research about communication techniques in the field of agricultural communications.

What would I do if I participate?
In this study, you will be asked to answer questions regarding your perceptions of celebrities, influencers, and an Instagram post you view.

Can I quit if I become uncomfortable?
Yes, absolutely. Your participation is completely voluntary. You may skip questions you do not feel comfortable completing. Participating is your choice. Your thoughts and opinions are valued.

How long will participation take?
This questionnaire will take approximately 15 minutes to complete.

How are you protecting privacy?
Your name will not be linked to any materials in reports, publications or presentations. No one other than the researchers associated with this project will have access to the raw data. All related documentation will be secure in the researcher's locked office on a password protected computer. Any information collected for entrance into the optional drawing will occur separately from the questionnaire and will be secured in the same manner. Your information collected as part of the research, even if identifiers are removed, will not be used or distributed for future research studies.

How will I benefit from participating?
Your participation will provide valuable information that will help further the understandings of celebrities and influencers in agriculture. At the end of the

questionnaire, you will have the opportunity to enter an optional drawing through a secure link.

I have some questions about this study. Who can I ask?
The study is being conducted by Dr. Nellie Hill and Creigh Rourke from the Department of Communications and Agricultural Education at Kansas State University. If you have any questions, you can email Ms. Rourke at creighr@ksu.edu. You may also contact Dr. Hill at nlhill@ksu.edu. Kansas State University also has a Research Compliance Office which can be contacted at (785) 532-3224 or comply@k-state.edu.

○ I have read the consent form and agree to participate.
○ I do not agree to participate.

Qualifying Question

Before beginning the questionnaire, please answer the following questions.

Are you an undergraduate student at Kansas State University?

○ Yes
○ No

What is your age?

[   ]

Social Media Use

The following questions will be about your current social media use.

Do you currently have an Instagram account?

○ Yes
○ No

How often do you open your Instagram account?

○ Several times a day
○ Once a day
○ A few times per week
○ Less often
○ Never

Current Pork Consumption Behaviors

Next, you will be asked about your current consumption of pork products.

On a regular basis, how often do you consume a pork product?

○ Several times a day
○ Once a day
○ A few times per week
○ Once per week
○ Less often
○ Never

What prevents you from consuming pork products?

○ Religious beliefs
○ Personal choice
○ Allergies or other medical conditions
○ [   ] Other (please specify)
○ Prefer not to say

Please indicate your agreement with the following statement:

I am confident that I can eat a pork product if I would like to.

○ Disagree
○ Somewhat disagree
○ Neither agree nor disagree
○ Somewhat agree
○ Agree

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Please indicate your agreement with the following statement:

Most people like me eat pork products.

- ⭕ Disagree
- ⭕ Somewhat disagree
- ⭕ Neither agree nor disagree
- ⭕ Somewhat agree
- ⭕ Agree

Current Pork Purchasing Behaviors

The following questions are about your current purchasing of pork products.

When you are looking to purchase a source of protein, how likely are you to purchase a pork product?

- ⭕ Very unlikely
- ⭕ Somewhat unlikely
- ⭕ Neither likely nor unlikely
- ⭕ Somewhat likely
- ⭕ Very likely

Please indicate your agreement with the following statement:

I am confident that I can purchase a pork product if I would like to.

- ⭕ Disagree
- ⭕ Somewhat disagree
- ⭕ Neither agree nor disagree
- ⭕ Somewhat agree
- ⭕ Agree

Please indicate your agreement with the following statement:

Most people like me purchase pork products.

- ⭕ Disagree

○ Somewhat disagree

○ Neither agree nor disagree

○ Somewhat agree

○ Agree

Current Website Visiting Behaviors

The following questions are about your current website visiting behaviors.

When you see information on your Instagram feed, how likely are you to visit a website included in the "learn more" feature at the bottom left of an Instagram photo?

○ Very unlikely

○ Somewhat unlikely

○ Neither likely nor unlikely

○ Somewhat likely

○ Very likely

Please indicate your agreement with the following statement:

I am confident that I can visit a website from an Instagram post if I would like to.

○ Disagree

○ Somewhat disagree

○ Neither agree nor disagree

○ Somewhat agree

○ Agree

Please indicate your agreement with the following statement:

Most people like me visit a website included in an Instagram post.

○ Disagree

○ Somewhat disagree

○ Neither agree nor disagree

○ Somewhat agree

○ Agree

Agricultural Background

You will now be asked a few questions about your background in agriculture.

Please indicate your level of agreement with the following statements:

|	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I am involved in production agriculture.	O	O	O	O	O
I am emotionally connected to the agriculture industry.	O	O	O	O	O
I strongly identify with the agriculture industry.	O	O	O	O	O
I trust the livestock production industry.	O	O	O	O	O
I have concerns about the safety of meat-based food products.	O	O	O	O	O
I believe livestock producers in the U.S. are dedicated to producing safe products.	O	O	O	O	O

Control Stimuli

Please carefully view and read in entirety the following Instagram post containing a person who enjoys cooking. She commonly prepares dishes for herself and her friends in her free time. Here she is sitting down for dinner.

Learn More >

146,934 likes

U.S. Pork Association Every dish is made better with pork!

View all 16 comments

2 days ago

Celebrity Stimuli

Please carefully view and read in entirety the following Instagram post containing celebrity actress and model, Hannah Phillips. Hannah started her career as a model. Since then, she has also acted in multiple tv shows on Netflix, Hulu, and other streaming services.

U.S. Pork Association ✓

Learn More ›

146,934 likes

U.S. Pork Association Every dish is made better with pork - just ask celebrity actress and model @hannahphillips!

View all 16 comments

2 days ago
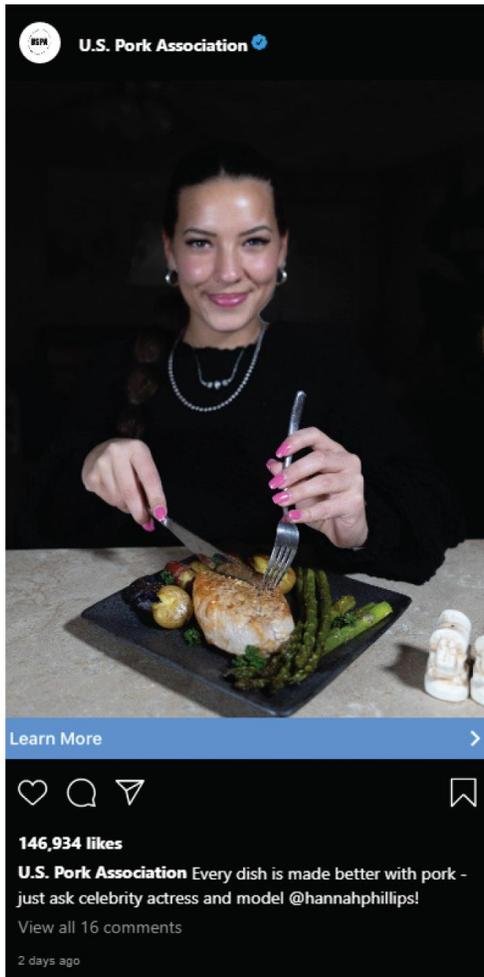
Influencer Stimuli

Please carefully view and read in entirety the following Instagram post containing social media beauty influencer and blogger, Hannah Phillips. Hannah started blogging about the beauty products she was using. Since then, she has grown her social media presence and routinely shares beauty recommendations and college hacks with her followers.

U.S. Pork Association ✓

Learn More ›

146,934 likes

U.S. Pork Association Every dish is made better with pork - just ask beauty influencer and blogger @hannahphillips!

View all 16 comments

2 days ago

Distraction

Press play to take a short break and watch the video below while the remainder of your questions are being customized based on your responses. You will be prompted to continue after the video is completed.

Funny Cat And mirror Video|Funny video|What's App Video...

Attitudes Toward Endorsement

The following questions are about the Instagram post you just viewed.

Please rate your attitudes toward the Instagram post you viewed.

Unappealing	○ ○ ○ ○ ○ ○	Appealing
Bad	○ ○ ○ ○ ○ ○	Good
Unpleasant	○ ○ ○ ○ ○ ○	Pleasant
Unfavorable	○ ○ ○ ○ ○ ○	Favorable
Unlikable	○ ○ ○ ○ ○ ○	Likable

Perceived Source Credibility

Please rate the trustworthiness of the person in the Instagram post you viewed.

Undependable	○ ○ ○ ○ ○ ○ ○	Dependable
Dishonest	○ ○ ○ ○ ○ ○ ○	Honest
Unreliable	○ ○ ○ ○ ○ ○ ○	Reliable
Insincere	○ ○ ○ ○ ○ ○ ○	Sincere
Untrustworthy	○ ○ ○ ○ ○ ○ ○	Trustworthy

Please rate the expertise of the person in the Instagram post you viewed.

Not an expert	○ ○ ○ ○ ○ ○	Expert
Inexperienced	○ ○ ○ ○ ○ ○	Experienced
Unknowledgeable	○ ○ ○ ○ ○ ○	Knowledgeable

| Unqualified | ○ ○ ○ ○ ○ ○ | Qualified |
| Unskilled | ○ ○ ○ ○ ○ ○ | Skilled |

Please rate the attractiveness of the person in the Instagram post you viewed.

Unattractive	○ ○ ○ ○ ○ ○	Attractive
Not classy	○ ○ ○ ○ ○ ○	Classy
Ugly	○ ○ ○ ○ ○ ○	Beautiful
Plain	○ ○ ○ ○ ○ ○	Elegant
Not sexy	○ ○ ○ ○ ○ ○	Sexy

Pork Purchasing Behavioral Intention

After seeing the Instagram post, how likely are you to purchase a pork product when looking to purchase a source of protein?

○ Very unlikely
○ Somewhat unlikely
○ Neither likely nor unlikely
○ Somewhat likely
○ Very likely

Visiting Website Behavioral Intention

How likely would you be to visit the website included in the "learn more" feature at the bottom left of the Instagram photo you just viewed?

○ Very unlikely
○ Somewhat unlikely
○ Neither likely nor unlikely
○ Somewhat likely
○ Very likely

Endorsement Susceptibility

Next, you will be asked about your personal experiences with celebrities and influencers.

An influencer is an individual who exhibits some combination of desirable attributes that allow them to influence a disproportionately large number of others.

Do you currently follow any influencers on Instagram?

○ Yes
○ No
○ Unsure

Have you ever purchased something because of a recommendation from an influencer on Instagram?

○ Yes
○ No
○ Unsure

How often do you purchase something because of a recommendation from an influencer on Instagram?

○ Never
○ Rarely
○ Sometimes
○ Always

A celebrity is an individual who enjoys public recognition.

Do you currently follow any celebrities on Instagram?

○ Yes
○ No
○ Unsure

Have you ever purchased something because of a recommendation from a celebrity on Instagram?

○ Yes
○ No
○ Unsure

How often do you purchase something because of a recommendation from a celebrity on Instagram?

○ Never
○ Rarely
○ Sometimes
○ Always

Demographics

Thank you for your responses. We will now ask you some demographic questions.

What is your gender identity?

○ Male
○ Female
○ Non-binary / third gender
○ [   ] Other (please specify)
○ Prefer not to say

Education

How many years of schooling have you completed toward your undergraduate degree?

○ Less than 1 year
○ 1 to 2 years
○ 2 to 3 years
○ 3 to 4 years
○ Over 4 years

What academic year standing are you classified as?

○ Freshman
○ Sophomore
○ Junior

○ Senior

What college is your major in?

⌄

Familiarity with Endorser

Do you personally know or know of the person who was in the Instagram post you viewed?

○ Yes
○ No
○ Unsure

Debriefing Statement

The Instagram post you viewed was created by the researcher based on similar Instagram posts by commodity organizations. The U.S. Pork Association is a fictional organization.

Appendix C - Initial Recruitment Email

Dear fellow Wildcat,

I am a master's student in Communications and Agricultural Education who needs your help with conducting research on the use of celebrities and influencers in agriculture. **Please complete the questionnaire at the bottom of this email**, to help us better understand how consumers like you interact with food and agriculture on social media.

The questionnaire will take less than 10 minutes to complete. **You will also be eligible to enter the optional drawing for one of the 10, $50 cash prizes** if you complete the questionnaire!

If you have any questions about this study, please contact me at creighr@ksu.edu or my advisor, Dr. Nellie Hill at nlhill@ksu.edu.

Follow this link to the Survey:
Take the Survey

Or copy and paste the URL below into your internet browser:
https://kstate.qualtrics.com/jfe/preview/previewId/6e3c27ca-0956-440d-8d9a-1b089237e974/SV_0ec4PczRCYw1feu?Q_CHL=preview

Thank you,
Creigh Rourke

Creigh Rourke
Graduate Teaching Assistant | Agricultural Communications & Journalism
Kansas State University
creighr@ksu.edu

Follow the link to opt out of future emails:
Click here to unsubscribe

Appendix D - Follow-Up Recruitment Email

From:	Creigh Rourke
To:	Creigh Rourke
Subject:	Shape agricultural social media reminder
Date:	Wednesday, February 22, 2023 12:33:27 PM

Dear fellow wildcat,

I am a master's student in Communications and Agricultural Education who needs your help with conducting research on the use of celebrities and influencers in agriculture. Please complete the questionnaire to help us better understand how consumers like you interact with food and agriculture on social media.

I greatly appreciate everyone who has participated in my study so far. If you have not already, **please complete the questionnaire at the bottom of this email by Sunday, February 26th**.

The questionnaire will take less than 10 minutes to complete. As a reminder, **if you complete the questionnaire, you are eligible to enter the optional drawing for one of the 10, $50 cash prizes**!

If you have any questions about this study, please contact me at creighr@ksu.edu or my advisor, Dr. Nellie Hill at nlhill@ksu.edu.

Follow this link to the Survey:
Take the Survey

Or copy and paste the URL below into your internet browser:
https://kstate.qualtrics.com/jfe/preview/previewId/6e3c27ca-0956-440d-8d9a-1b089237e974/SV_0ec4PczRCYw1feu?Q_CHL=preview

Thank you,
Creigh Rourke

Creigh Rourke
Graduate Teaching Assistant | Agricultural Communications & Journalism
Kansas State University
creighr@ksu.edu

Follow the link to opt out of future emails:
Click here to unsubscribe

Appendix E - K-State Today Announcement

Participants needed for agriculture in social media online questionnaire

Submitted by Creigh Rourke

Creigh Rourke, graduate student in the communications and agricultural education department, is looking for undergraduate students to participate in a 10-minute online questionnaire. Participants are eligible to be entered into an optional drawing for one of 10, $50 cash prizes.

The purpose of the study is to research the use of celebrities and influencers in agriculture. Participant responses to the online questionnaire will allow for a better understanding of how consumers interact with food and agriculture on social media.

Link to questionnaire.

Contact Rourke at creighr@k-state.edu or her advisor, Nellie Hill, at nlhill@k-state.edu for more information.

Thank you for your participation.

This study has been reviewed by the Institutional Review Board and received approval No. 11462.