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May I help you? How stereotypes and innuendoes influence service encounters

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MAY I HELP YOU? HOW STEREOTYPES AND

INNUENDOES INFLUENCE SERVICE

ENCOUNTERS

by

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ABSTRACT

"You only get one chance to make a good first impression." The dissertation focuses on marketing agents; among the most visible is the "service provider." Previous research establishes the important role of cognitive social schemata in determining the way consumers react to different types of marketing agents, including service providers. In the literature review, a classification schema is developed for service provider stereotypes derived from theory using social stereotypes. The development of the *Service Provider Perception Framework (SPPF)* creates a classification for the individual service provider along two main dimensions: competence and affect.

In services design (particularly situations involving a first impression or service encounter that has yet to develop into a committed relationship) consumers commonly possess and maintain stereotypes for service providers based on accumulated knowledge about people in a provider category. Prior to entering a service encounter, consumers use available information to form judgments based on descriptions of the selected service provider. Due to unfamiliarity with the specific provider, consumers are apt to focus on tangible cues (stereotypical attributes) of the service provider to evaluate the level of perceived quality and satisfaction associated with the service.

This research furthers our understanding of how consumers evaluate service providers and, subsequently, the service experience. Following the development of the

SPPF, this research uses two empirical studies to examine stereotypes, the use of innuendos, and various service outcomes on service encounters.

The innuendo study confirms placement of four service provider types in the SPPF and examines how consumers' perceptions of service providers change when subjects are provided incomplete information regarding only one dimension of the SPPF. The main study examines how consumers perceive service providers and the subsequent service encounter when the service provider is not what the consumer had expected to come into contact with.

This research integrates cognitive social psychology with services marketing to advance the marketing discipline. Key findings increase knowledge of service provider perceptions as viewed by consumers and recommends methods to create prosperous relationships and improve existing relationships between the provider and the consumer utilizing characteristics associated to the *"type"* of service provider.

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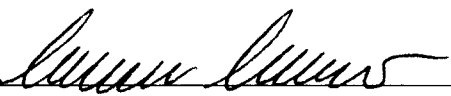
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CHAPTER 1

INTRODUCTION

Imagine that you have just taken a promotion for your job in a new city thousands of miles away from family, friends, and comfort. You pack up your belongings and travel to your new city where you unpack and get situated. After you settle in, you find yourself with an aching tooth. You have yet to meet anyone in this new city, so you are unfamiliar with any dental offices or dentists. How would you go about finding a dentist to fix your aching tooth? If you are like 70% of individuals (Barone 2010), your first thought would be to conduct a web search. As you scroll through the long list of web sites for dentists in your area, you get a sense for what dentists are like, including what they look like and their public qualifications, not to mention customer reviews.

Some initial reactions are based on the photos and descriptions from the web site. While multiple dentists match your expectations in terms of the apparent attributes such as personal physical characteristics and qualifications, some do not. The dentists are not all of the same age, ethnicities, or gender. For instance, most dentists seem physically fit, although some appear more heavyset. With respect to clothing, some dentists are pictured wearing a professional suit, others have on scrubs and a white laboratory coat, and yet some even have on a casual polo shirt and khaki pants. The personal or biographical information also varies greatly with respect to the information conveyed

about the dentist and the dental practice. Information varies from the dental school the dentist attended and honors awarded while attending school to the types of dental procedures offered in the office; and sometimes, even the names of the dentist's children and pets are included. An alternative to conducting a web search would be to ask a new co-worker about a dentist that he or she uses. This co-worker would also be able to provide a verbal description of a dentist in terms of physical appearance and professional qualifications to meet your needs.

Given that selecting a dentist for a "test run" in such a situation is difficult, how does one ultimately decide which dentist will provide the highest level of overall quality and satisfaction? Evaluating the information available at the time of need, which characteristics of the dentist are most valuable? How does the initial information that a consumer receives about a new service provider turn into a decision on whom to visit, and how is the experience affected by the initial impression?

Background

According to impression management research (Goffman 1959; 1973), in social situations consumers' behaviors are guided strongly by the norms that exist for the given situation. Elaborating on the work of Shakespeare, Grayson and Shulman (2000), impression management theorists propose that people enact "roles" and "scripts" on the "stages" of life. Service companies utilize front-line employees to communicate and control the image that consumers hold of the product or service. Thus, following this metaphor, service providers play a role on a stage. How closely must they follow the script to maintain integrity in the service experience?

Role expectations include beliefs and subjective assumptions that individuals hold regarding appropriate conduct for others occupying a particular position in a social situation (Sarbin and Allen 1968). In social situations, a consumer's role expectations influence cognitive and affective reactions, thus each character has an associated "role set" that is accompanied by complementary societal (or social) behavioral expectations (Merton 1957). Metaphorically then, a bundle of roles equates to "social scripts" that dictate the type of impression the service provider should demonstrate to encourage consumers to assimilate the individual into the category (Grayson and Shulman 2000). Though many social situations run smoothly because the actors have a shared definition of the situation, occasions arise where people disagree, requiring more explicit negotiation (Grayson 1998; Rafaeli 1989).

Service employees may differ in a variety of ways, including age, ethnicity, or gender. These differences, though often objectively irrelevant to the level of service quality provided, may still influence a customer's perceptions of service quality in a service encounter (Matta and Folkes 2005). What happens when a service provider's description fails to fit the role that he or she is designed to play? As with products, consumers may well avoid any contrast from the associated cognitive type. To reduce the level of fear from the consumer's perspective that a counterstereotypical service provider would deliver poor quality, employers may avoid hiring individuals who may be perceived as counterstereotypical in the service setting; thus reducing the uncertainty in the perception of service quality (Grayson and Shulman 2000).

Consumers perceive a company's image through interactions with service personnel (Ezeh and Harris 2007). In the literature, more attention has been paid to

social interactions between customers and employees (Newman 2007), and less attention has been given to prospective customers and how they decide which service provider to patronize without prior interaction experience. Behavioral scientists (Gosling, Ko, Mannarelli, and Morris 2002) have theorized the process which individuals use to infer dispositional characteristics of a person (potential service provider) from their appearance or belongings. A common attribute prospective customers use to judge an employee is competence. Gosling et al. (2002) propose two mechanisms by which inferences can be made. First, inferences can be the result of a two-step mechanism linking the individual to the environment they inhibit through one of two categories: identity claims (self-directed and other directed) and behavioral residue (interior and exterior) (Gosling et al. 2002). Second, inferences can be made through the activation of a stereotype (Gosling et al. 2002). Objects or symbols in the environment may trigger stereotype activation (Kay, Wheeler, Bargh, and Ross 2004) associated with a set of traits.

Stereotypes and the Innuendo Effect

In the social cognition literature, cognitive stereotypes are formed, used, and maintained by people and consumers (e.g., Fiske 1998; Hamilton and Sherman 1994; Hamilton, Stroessner, and Driscoll 1994; Macrae, Stangor, and Hewstone 1996) and serve as a basis by which individuals/consumers judge groups and/or members of a group (e.g., Kunda and Sherman-Willaims 1993; Sagar and Schofield 1980). Service providers are a stereotyped group based on their occupation in that individuals hold knowledge, beliefs, and expectations about their typical characteristics (Weber and Crocker 1983). While it is probable that a large number of service providers in any given category will possess many stereotype-consistent characteristics, consumers sometimes encounter an

individual who violates the social stereotype. An encounter with a counterstereotypical service provider will be viewed differently than one with a stereotypical service provider (Matta and Folkes 2005), thus having a different set of expectations and perceptions. Chapter 2 presents an in-depth description of the social cognition literature and the relation to service provider expectations and perceptions using stereotyped knowledge.

The term 'innuendo effect' is used to describe the tendency for an individual to assume negative conclusions about an unknown individual otherwise described with positive characteristics. The omission of information on one of two dimensions of social perception can trigger the innuendo effect (Abele and Wojciszke 2007; Fiske, Cuddy, and Glick 2007). Introducing the innuendo effect into the services literature provides evidence on the way consumers process and classify information when encountering a service provider.

At the time of a first encounter, consumers rarely possess anything approaching complete information about the new service provider. First impressions begin to form as soon as the consumer receives information describing the person's attributes, thus shaping the expectations and perceptions of the service being performed and the provider performing the service. Research is needed in this area to understand how consumers "fill in" the missing information and reconcile the differences between information provided and information assumed.

Purpose Statement

The purpose of this research is to further understanding of how consumers evaluate service providers and, subsequently, the service experience. Figure 1.1 provides

a schematic of the service provider perception process to be discussed. According to their very nature, services often involve an interaction between employees and customers (Hurly 1998). Evidence suggests that the customer orientation of a firm and the firm's employees significantly impact marketing success over the long term (e.g., Deshpande, Farley, and Webster 1993; Saxe and Weitz 1982). If this is true, then it is necessary to understand how consumers perceive the service provider and, subsequently, the service firm, and how the perceptions of the service provider impact the desire to form a lasting relationship.
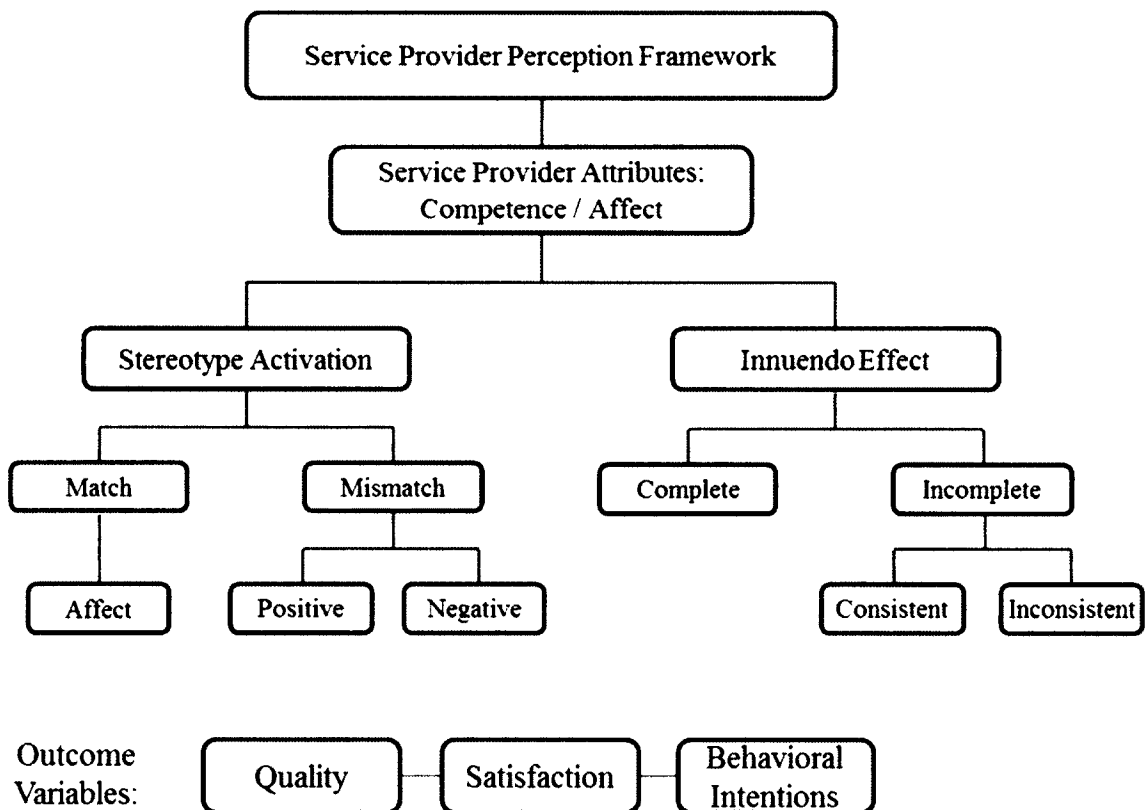
Figure 1.1 *Purpose of Research*

To accomplish the purpose of the research, the first step is to evaluate how consumers perceive service providers. Following research on social perception (Allport 1954; Bettelheim and Janowitz 1950), a classification framework is constructed evaluating service providers on two dimensions: competence and affect. The competence dimension evaluates how competent the service provider is to complete the service as well as his or her overall general knowledge level. The affect dimension evaluates how pleasant and friendly the service provider is and what overall feeling level the consumer has when interacting with this service provider. Once classified in the framework according to the two dimensions, further examination can be conducted on the type of service being provided (experience or credence) and the nature of the service (professional or nonprofessional), among others.

The second step is to introduce the innuendo effect into the services marketing literature. Individuals are confronted with incomplete information when undergoing a search for a new service provider. Consumers must find a method to reconcile incomplete information before selecting a service provider they feel most adequately meets their needs in the specific service situation. According to Deval, Mantel, Kardes, and Posavac (2013) naïve theories provide subtle primes in consumer contexts that guide consumers' beliefs regarding marketplace phenomena and perceptions. The innuendo effect has been tested in social psychology, finding that a positive description on one dimension (warmth or competence) can lead to a negative overall evaluation of the individual due to the omission of a description on the other dimension. However, research studies counter the innuendo effect, finding that individuals reconcile information through the use of the halo effect (Thorndike 1920), that a positive

description on one dimension leads to a positive description on the other dimension, thereby thinking that a person in generally good (or bad). This dissertation examines which theory applies across service provider contexts.

Consumers use the internet to conduct searches when facing a decision with little known information. In the selection of a service provider, the web provides an abundance of information with which consumers can make a determination, though the information provided is not all inclusive. Consumers must sort through this information, drawing inferences on what is given to make a selection. It is probable that the innuendo effect is one way consumers resolve the issue of incomplete information in the selection of a service provider.

The third step is to understand how consumers perceive service providers and the subsequent service encounter when the service provider is not what the consumer had expected to come into contact with. At a time when individuality is embraced in many facets of daily life, it is becoming common that a service provider will not fit the "stereotypical mold" that the consumer still holds. Unlike the purchase of a product where a consumer can more easily walk away before purchasing, in a service encounter it may be more difficult for the individual to leave the situation if the first impression is not as expected.

Research is needed on the disconfirmation of expectations when the prototypical service provider is not upheld in an actual encounter. Given that the encountered individual performs at the same level or even better than the stereotypical person, research is needed on the outcome variables of perception of quality, satisfaction level, and future patronage intentions.

Contributions of Research

Marketing and psychology can both benefit from the examination of stereotypes and innuendoes related to a service provider. The development of a service provider classification scheme supplies the groundwork for much marketing research. This base is what service provider stereotypes are derived from, and is used to introduce the innuendo effect into services marketing. Thus, this research generates both theoretical and practical contributions to the marketing discipline as seen in Table 1.1.

Table 1.1

Research Contributions

Theoretical Areas	Contribution Potential		
	Practical	Theoretical	Methodological
Cognitive Psychology	Effect of Stereotypes on Consumer Cognition	How Innuendos Interact with Stereotype Activation	
Social Psychology	Effect of Stereotypes on Cognitions	Extend the Innuendo Effect into the Marketing Literature	
Services Marketing	Introduction of Innuendo to Stereotypes Design of Services Environment	Classification of Services Providers	Methods of Studying Stereotypes
Retailing	Hiring Practices Training Advertising	Stereotypical Environments	

Theoretical Contributions

This dissertation will develop a classification scheme of service providers based on the ways consumers react to initial but incomplete information. A balance theory perspective provides the basis for describing consumer reactions to stereotypical categories. The *Service Provider Perception Framework* (SPPF) allows for the classification of service providers according to individual attributes of their associated profession based on two main dimensions: affect and competence. The affect dimension is associated to the relational aspects of the service encounter, while the competence dimension is associated to the core service component. The SPPF creates a way to classify the individual service provider as opposed to other services classification schemes (see Lovelock 1983 for previously proposed schemes) within the service environment allowing marketers to differentiate the service from the provider, thus advancing the subtopic of services within the marketing discipline.

This research presents a contribution to the schema congruity literature with respect to prior knowledge about a service encounter or, more specifically, a service provider. According to Fiske and Taylor (1991) processers with impoverished knowledge are likely to be more sensitive to schema-inconsistent information, whereas processers with well-developed knowledge have the ability to use both schema-consistent and schema-inconsistent information. Peracchio and Tybout (1996) use the "dessert" product category to support the notion that the schema-congruity effect is shown in individuals lacking elaborate knowledge but does not exist for those individuals who have more elaborate knowledge. Additionally, previous researchers (Fiske and Taylor 1991; Meyers-Levy and Sternthal 1993; Yi 1990) note that evaluative interpretation of

attributes may differ as a function of an active schema. Using the service encounter setting, this research will identify how individuals evaluate schema-consistent and schema-inconsistent service providers under conditions of high knowledge of the occupation category and low knowledge of the occupation category, thus indicating the consumers' level of knowledge or involvement with the associated category.

In addition, this research intends to extend prior studies regarding the evaluation of physical attractiveness in service providers. Koernig and Page (2002) provide an explanation of how a service type moderates the effects of service provider physical attractiveness in two conditions: a service related to attractiveness and a service unrelated to attractiveness. Koernig and Page assess the total number of thoughts generated by consumers in each condition, finding that a greater number of thoughts were generated when the provider did not meet the consumers' expectations with respect to physical attractiveness. The current research also contributes to the physical attractiveness literature by assessing the attractiveness of service providers in more than two situations. Previous research on this topic only addresses service provider physical attractiveness in two types of service conditions: attractiveness relevant to the service context (e.g.: beautician) or attractiveness irrelevant to the service context (e.g.: lawnmower repair). In addition, the current studies contribute to marketing theory by incorporating the number of thoughts generated by consumers when a disconfirmation occurs between service provider expectations and the actual encounter (regarding physical attractiveness) with the ability to co-create the service. If consumers are more involved with generating thoughts about the expected quality or satisfaction level with the service provider because

of physical appearance and additional physical characteristics, will involvement with the service be hindered?

This research builds upon the stereotype literature providing empirical evidence of the occupational stereotype associated with service providers and the accompanying expectations and perceptions as shown from the consumers' perspective. In services marketing, stereotypes guide consumers' expectations about the quality and satisfaction level anticipated from the service encounter. Research finds that counterstereotypical group members are not dismissed, though they are perceived to be different from other employees (Matta and Folkes 2005). Thus, this research furthers prior work on occupational stereotypes (Weber and Crocker 1983), elaborating on the perceptual differences between stereotypical and counterstereotypical service providers.

Another contribution to marketing theory lies within the zone of tolerance in the gaps model (Zeithaml, Berry, and Parasuraman 1993). Past experience, or a customer's previous experience to a service that is relevant to the current service, shapes desires and predictions (Scott and Yalch 1980; Smith and Swinyard 1983) in a service encounter. Cadotte, Woodruff, and Jenkins (1987) find that the use of different experience norms lead to customer satisfaction. This research involving service providers that are either a match or mismatch to stereotypical norms delivers understanding to the range within the zone of tolerance. Predicted service is likely to be different depending on the type of service provider the customer encounters, shaping the level of predicted service as well as the range between desired service and adequate service.

Contributing to the research on the innuendo effect is the implementation of its use with respect to service providers. If the innuendo effect is found to be nonexistent in

the services literature, a competing theory is offered: The Halo Effect. The halo effect dictates that individuals have a tendency to "think of a person in general as rather good or rather inferior and to color the judgment of the separate qualities by this feeling" (Thorndike 1920, p. 25). This theory, documented in person perception research (Asch, 1946; Kelly 1950; Nesbitt and Wilson 1977; Srull and Wyer 1989) implies that if positive information on an individual is provided (regardless of whether it is on the salient or nonsalient dimension), the net result will be a positive inference across the other dimension.

Social perception models, developed in social psychology, such as the well-developed Stereotype Content Model (Fiske, Cuddy and Glick 2007; Fiske, Cuddy, Glick, and Xu 2002) and the Brands as Intentional Agents Framework (Kervyn, Fiske, and Malone 2012) provide a foundation for the development of a similar framework in services marketing to understand how consumers perceive and relate to service providers. Developing this framework for service providers will prove valuable in understanding and influencing consumer behavior. Research on the social perception of service providers will help explain the findings provided from quality, satisfaction, and behavioral intentions.

The establishment of long-term marketing relationships, known as relationship management (RM), has influenced both marketing theory and practice (Gronroos 1991; Kotler 1991; Sheth and Parvatiyar 1995). Using four broad variables (environmental variables, partner variables, customer variables, and interaction variables), Bendapudi and Berry (1997) find that when practical to do so, it is more desirable for service providers to use dedication to build relationships rather than constraints. Consumers stay

in dedicated relationships with service providers because they "want to," whereas they stay in constraint relationships because they "have to." A relationship occurs when an individual exchange is assessed as a continuation of past exchanges that are likely to continue into the future rather than as an exchange evaluated individually (Czepiel 1990, p. 15). Thus, to have a relationship with a service provider, one must enter into and begin a relationship with a one. This research expands the RM literature providing evidence on a first impression with a service provider that either does or does not lead to a relationship due to the impact of stereotypical expectations and the effects of reconciling information given an innuendo.

Practical Contributions

Research indicates that consumer purchases are not directly impacted from the use of advertising on product marketing (Schudson 1984), though advertising does play an important role in generating consumer understanding and guiding individual expenditures (Aaker, Batra, and Myers 1992). Employment advertising is viewed in much the same way as product advertising: providing various aspects of employment and organizational culture. Employment advertising is used as a medium to help readers disseminate messages about employment, to help inform individuals regarding prevailing conceptions of employment, and to attract new employees (Rafaeli 2006). The innuendo effect contributes to organizations by providing an understanding of how individuals reconcile incomplete information and form judgments in the process of advertising a job opening. Organizations can use this research on the innuendo effect found in consumers' perceptions of service providers to create employment advertisements that effectively communicate complete and desired information without allowing the reader to draw

negative inferences on omitted dimensions. Additionally, organizations can use this research in the design of websites, use of scripts, job roles, and aesthetic labor practices, among others.

Organization

This dissertation is arranged in the following manner. Chapter 1 provides an overview of the conditions that surround the service encounter. Stereotypes are introduced as part of the social cognition literature, identifying how service providers are impacted by perceptions consumers hold of the stereotyped individual or associated category. The innuendo effect adds insight into the way consumers perceive a service provider they encounter for the first time, given that they are making and forming judgments based on incomplete information.

Chapter 2 provides a literature review of the current research and its connection to the proposed conceptual model. Literature from both psychology and marketing is combined to develop the Service Provider Perception Framework, classifying service providers on the dimensions of competence and affect, which will be used in the innuendo study and main study. The chapter concludes with a proposed conceptual model and hypotheses that provide an understanding of both cognitive and affective outcomes to a service encounter when the service provider does not meet the consumer's prior expectation.

Chapter 3 contains the research methodology outlined for each of the studies and the proposed data collection. Chapter 4 discusses the details surrounding the data analysis for each study conducted and displays the empirical results. Lastly, Chapter 5 concludes the dissertation with a discussion of the findings, the implications of the

results, the contribution of the studies, the limitations of the research, and the suggestions

for areas of future research.

CHAPTER 2

LITERATURE REVIEW AND

CONCEPTUAL DEVELOPMENT

Chapter 2 provides a theoretical background for the present study. I provide a review of the relevant service, stereotype, and innuendo literature, applying both marketing and psychology research. In addition, related theories are discussed providing supporting detail for the outlined literature reviews. The review of relevant literature on these main concepts is necessary in order to understand previous contributions and where additional contributions will further the body of knowledge in each studied area.

The first component begins with a discussion of the literature on services including an introduction to services, the service encounter, the difference between goods and services, service quality, and service satisfaction. Following this component is a review of the literature on stereotypes. Stereotypes have been used in both marketing and psychology and will be reviewed from both domains. Third, a review of the innuendo effect as used in psychology will be presented, indicating where the innuendo effect can be incorporated into the marketing literature.

The second component of this chapter includes the development of the Service Provider Perception Framework (SPPF). The SPPF creates a classification of service providers based on two main dimensions: competence and affect. The last component in

this chapter is the conceptual development section, including the conceptual model, research questions, and hypotheses to be tested.

Research on Service

Introduction to Services

More attention is being paid to services because services have become an integral part of today's economy. According to the Office of the United States Trade Representative, service industries account for 68 percent of GDP in the United States and four out of every five jobs in the United States. Table 2.1 summarizes personal service expenditures from 2003 through 2012. In 2012, personal services expenditures accounted for 64 percent of total personal consumption expenditures and 39 percent of the gross domestic product. The data indicate that the personal services expenditures category has not seen major "peaks or valleys" in the last ten years, but has steadily increased.

To study services, it is necessary to first understand what services are. One of the earliest definitions of services was announced by The American Marketing Association Definitions Committee (1960, p. 21) as the "activities, benefits or satisfactions which are offered for sale, or are provided in connection with the sale of goods." More precisely, services represent (1) intangibles yielding satisfactions directly such as insurance policies, education, and information services, (2) tangibles yielding satisfaction directly such as transportation services and housing, or (3) intangibles yielding satisfaction together when purchased either with commodities or other services such as delivery services and credit (Regan 1963).

Table 2.1

Personal Service Expenditures

Personal Service Expenditures as Percentages of
Gross Domestic Product and Total Personal Consumption Expenditures
(2003 through 2012)[a]

	In Billions (of current dollars)				% Services of Gross Domestic Product	% Services of Personal Consumption Expenditures
Year	Gross Domestic Product	Total personal consumption expenditures	Total goods	Total services		
2003	11,142.2	8,244.5	2,827.2	5,418.2	48.63%	65.72%
2004	11,853.3	8,515.8	2,953.3	5,562.7	46.93%	65.32%
2005	12,623.0	8,803.5	3,076.7	5,726.8	45.37%	65.05%
2006	13,377.2	9,054.5	3,178.9	5,875.6	43.92%	64.89%
2007	14,028.7	9,262.9	3,273.5	5,990.2	42.70%	64.67%
2008	14,291.5	9,211.7	3,192.9	6,017.0	42.10%	65.32%
2009	13,973.7	9,032.6	3,098.2	5,930.6	42.44%	65.66%
2010	14,498.9	9,196.2	3,209.1	5,987.6	41.30%	65.11%
2011	15,075.7	9,428.8	3,331.0	6,101.5	40.47%	64.71%
2012	15,676.0	9,605.3	3,433.5	6,178.0	39.41%	64.32%

[a] Sources: Data for 2003-2012 adapted from "Gross Domestic Product" and "Real Personal Consumption Expenditures" Economic Indicators (January 2013), p. 1, 4.

In academics, individuals often use the characteristics of services to create a services definition. Pearce (1981) refers to services as "intangible goods" because of the simultaneous consumption and production. The following year, Bannock, Baxter, and Reese (1982, p. 372) define services as "customer or producer goods which are mainly intangible and often consumed at the same time they are produced" and that "service industries are usually labor-intensive." Karmarkar and Pitbladdo (1995, p. 397) define services to include "intangibility of service output, the lack of inventories, the difficulty of portability, and complexity in definition and measurement... and often involve joint production between the buyer and the supplier." Harvey (1998) indicates that intangibility and customer contact are the two features that most distinguish services. Additional characteristics that most notably define services include intangibility,

heterogeneity, inseparability of production and consumption, customer contact, perishability, and labor intensity (Nie and Kellogg 1999). While these definitions define characteristics of services, no one definition can be used to cover the complete realm of services.

Berry and Parasuraman (1991) indicate that a simple dichotomy between manufacturing firms and service firms does not exist because there is no clear-cut distinction between goods and services. A different view is that services can be deeds, processes, and performances (Zeithaml and Bitner 1996). These authors view services as effects that cannot be seen, smelled, or touched. While all of the above efforts to define services have not been without merit, Cook, Goh and Chung (1999, p. 319) believe that "no single definition of service is capable of encompassing the full diversity of services and the complex attributes that accompany them."

In 2004, Vargo and Lusch presented the service-dominant logic paradigm integrating relationship marketing literature (Morgan and Hunt 1994) with literature on customer orientation (Narver and Slater 1990) while using fewer of the traditional marketing models focusing on the ihip (intangibility, heterogeneity, inseparability of consumption and production, and perishability) characteristics (Lovelock 1983). According to Vargo and Lusch (2004, p. 2), *service* is defined as "the application of specialized competencies (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself." Service, as defined above, also results from goods. This later definition illustrates the use of the human component in the delivery of a service. From this, it can be thought that not only is the human component necessary in the delivery of a service, but a high level of competence

seems required to effectively apply resources. The contributions by an individual (knowledge, skills, time, affect) separate services from other deeds and will be studied further in this research.

Service Encounter

The service encounter is the moment that a customer meets and interacts with a service provider (Roth and Menor 2003; Surprenant and Solomon 1987). In this "moment of truth" (coined by Jan Carlzon, former CEO of Scandinavian Airlines System (SAS), Carlzon (1991)), the customer experiences the services delivered and then forms evaluative judgments which influence the overall satisfaction, intention to repurchase, and loyalty. Understanding the overall service encounter involving a customer and frontline employee (service provider) is important because it is this time that customers experience the delivery of services and form judgments motivating their overall feelings and attitudes toward the service and service provider.

Surprenant and Solomon (1987, p. 87) define a service encounter as "the dyadic interaction between a customer and a service provider." The nature of the service interaction has been documented as a critical determinant for overall satisfaction with the service (Czepiel, Solomon, Surprenant, and Gutman 1985). In an earlier article, the authors present a framework adapted from social psychology, indicating three relevant perspectives that service encounters are (1) dyadic, (2) human interactions, and (3) involve role performances (Solomon, Surprenant, Czepiel and Gutman 1985).

The statement that "service encounters are dyadic" maintains that "the sale (of a product or service) is a social situation involving two persons. The interaction of the two persons, in turn, depends upon the economic, social, and personal characteristics of each

of them. To understand the process, however, it is necessary to look at both parts of the sale as a dyad, not individually" (Evans 1963, p. 76). The dyadic approach is influenced by face-to-face encounters and group activity acknowledging that the service encounter is a type of social exchange whereby participants typically seek to maximize the rewards as well as minimize the associated transaction costs (cf. Homans 1961). Also, it is assumed that at some point it is both feasible and desirable to measure units of behavior, and to evaluate their contribution to the quality of subsequent outcomes (cf. Bales 1950). The total prospective value of the encounter is assessed substantially through this exchange.

The statement that "service encounters are human interactions" refers to an act which is a purposive transaction whose outcome depends upon the coordinated actions of both parties. In the dyadic interaction, one cannot predict the quality of outcomes with knowledge of only one party's behavior (Solomon, Surprenant, Czepiel and Gutman 1985). In its place, much social behavior consists of a joint activity or mutual coordination of appropriate behavior vis-à-vis the other person (Thibaut and Kelly 1959). Because the success of the particular service provider lies within the quality of the subjective experience, long run market success is established from the nature of the experience (Solomon, Surprenant, Czepiel and Gutman 1985).

The statement that "service encounters involve role performances" refers to the ritualized behavior patterns governing the course of a service encounter. Each party involved in the transaction has learned a set of appropriate behaviors for the situation to increase the probability of goal attainment (Solomon, Surprenant, Czepiel and Gutman 1985). Role theory emphasizes the nature of individuals as social actors who learn

appropriate behaviors for the positions they occupy in society (Solomon, Surprenant, Czepiel and Gutman 1985).

Role theory began as a theatrical metaphor describing how theater performances were differentiated and predictable since actors performed "parts" for which "scripts" were written. "The study of a role – a cluster of social cues that guide and direct an individual's behavior in a given setting – is the study of the conduct associated with certain socially defined positions rather than of the particular individuals who occupy these positions" (Solomon, Surprenant, Czepiel and Gutman 1985, p. 102). Thus, the theory examines the degree to which a role is played appropriately (role enactment) as determined by the reactions of other actors or observers (the audience).

Service providers act according to the service position they are playing and are judged by the reactions of the customers. Given the intangible nature of the service environment, one aim is to provide consistent service at an acceptable level across individual service providers (Grove and Fisk 1983). Additionally, individuals are often defined by the service roles they play. A person is able to generate a profile for another individual who is labeled a doctor, hair stylist, or nail technician based on the characteristics believed to covary with the selected title. Service providers are not the only ones to fulfill a specific role in the service encounter. The customer or client role is composed of a set of learned behaviors, or a repertoire of roles; the actual script that is read and enacted depends upon the demands of the specific service environment and additional situational cues (Lutz and Kakkar 1976).

A second, broader definition of the service encounter by Shostack (1985) is known as "a period of time during which a consumer directly interacts with a service."

Shostack does not limit the definition by the interpersonal interaction between customer and employee and suggests that the service encounter can occur without human interaction present (Bitner, Booms, and Tetreault 1990). This definition includes all aspects of the service: personnel, physical facilities, and other discernable elements with the entire service encounter.

Many researchers connect on the conceptualization of a service encounter to represent the interchange between a service provider and client, where the client experiences main components including the core service component and the relationship service component (Berry 1983; Bitner, Booms, and Tetreault 1990; Crosby and Stephens 1987; Solomon, Surprenant, Czepiel, and Gutman 1985; Surprenant and Solomon 1987; Swartz and Brown 1989). The core service component is the part of a service that comes to mind when a service is named: the medical diagnosis received from a doctor or the haircut received from a barber. The relational aspect of a service is described as the interpersonal process by which the service is delivered and is viewed as especially important with respect to customer interactions with professional service providers (Crosby and Stephens 1987; Swartz and Brown 1989). The relational aspect can be described as the bedside manner received from the doctor or the friendly banter from the barber.

The literature indicates the relational component of the social exchange between the service provider and client that was once thought to be a peripheral cue adds actual value to the overall service quality but cannot be used as a substitute for a strong core service (Crosby and Stephens 1987). Thus, a service relationship stands independently of the service core; the service relationship does not merely (or even necessarily) provide a

signal regarding the quality of the service core. For example, being a compassionate and caring nurse would not offset knowledge deficiencies in the medical care area and would not be an accurate sign of medical ability alone. On the other hand, a well-mannered and well-dressed automobile mechanic adds value only if the core benefits are sufficient.

Services Versus Goods

Shostack (1977) writes about fundamental differences between the marketing of goods and services: services are less standardized than goods and thought to be processes partly due to their reliance on interpersonal interactions. Four main characteristics have been identified that differentiate services from goods: intangibility, heterogeneity, inseparability of production and consumption, and perishability (often referred to as 'ihip') (see Zeithaml et al. 1985 for a summary of references documenting the differences). The first and most universally cited difference by authors (e.g., Bateson 1977; Berry 1980; Lovelock 1981; Rathmell 1966, 1974; Shostack 1977) is intangibility. Intangibility is seen as *the* critical distinction between goods and services for which all other differences emerge (Bateson 1979). Because services are performances as opposed to objects, they are unable to be felt, seen, tasted, or touched in the same way that goods can be detected. The purchase of cookies at a store can be held, seen, tasted, and touched by the consumer, but the medical diagnosis from a general physician cannot. Services provide benefits that are often intangible and difficult to evaluate prior to purchase, if the benefits are able to be evaluated at all. Thus, consumers use tangible cues to predict what the service firm will provide. To do so, consumers use perceptions of service providers as a surrogate to the service firm (Shostack 1987; Zeithaml, Parasuraman, and Berry 1985; Berry and Clark 1986; Shostack 1977). A consumer will utilize tangible cues such

as an orderly office, a recognizable hanging diploma, and a neatly groomed physician when predicting the overall outcome from a visit to a doctor when intangible cues cannot be evaluated.

The second difference, heterogeneity, can be a particular problem in service output for labor intensive services (Langeard, Bateson, Lovelock, and Eiglier 1981). Service performance from the same individual is also variable: "People's performance day in and day out fluctuates up and down. The level of consistency that you can count on and try to communicate to the consumer is not a certain thing" (Knisely 1979, p. 58). Consumers typically frequent the same hair stylist for an extended period of time, and while they may ask for the same type of haircut, the final result could be shorter or longer than desired and quite different from the last time they had their hair cut. This second difference, heterogeneity, has the potential for a high level of variability in the performance of services.

The third difference, inseparability of production and consumption, is the simultaneous production and consumption characteristic of most services. Goods are produced first, sold second, and then consumed third, whereas services are sold first, and then produced and consumed at the same time (Regan 1963). Upon entering a hair salon, the stylist first commits to cutting the consumers' hair, thus selling the service, and then begins to produce the haircut at the same time that the consumer consumes the haircut.

The last difference, perishability, indicates that a service cannot be saved (Bessom and Jackson 1975; Thomas 1978). Services are performances that cannot be stored, sometimes creating a discrepancy between supply and demand. A hair salon may be over-booked on a Saturday morning, indicating too much demand, but may be under-

booked on a Tuesday afternoon, indicating too little demand. Contrasting this view is the idea that goods can be equally as perishable as services. For example, a baker cannot store or save a cake for more than a few days. The baker must throw out the cake when it has spoiled if it has not been purchased first. This indicates that goods can be equally as perishable as services.

The "ihip" characteristics used to define services has been subject to much criticism (Lovelock and Wright 2001; Gummesson 2000; Vargo and Lusch 2004). As said by Lovelock and Gummesson (2004, p. 32), "As a paradigm, the notion that the four IHIP characteristics make services uniquely different from goods is deeply flawed." The reasons noted for the flaws include (1) a change in the focus of services marketing and (2) the advanced development of both information and communication technology. Moeller (2010) shows the literature on each of the four ihip characteristics, exemplifies the associated criticisms, and then couples the characteristics with the newly developed FTU framework (facilities, transformation, and usage) to show that each characteristic is both useful and valid when related to a single aspect of the services as opposed to assigning the characteristic to the entity.

Service purchases are more uncertain than good or product purchases (Murray and Schlater 1990; Guseman 1981). According to Zeithaml (1981), services are characterized by experience and credence properties (i.e., characteristics that can only be evaluated after some consumption or those characteristics that are difficult to evaluate even after consumption occurs) more than search properties, whereas goods are more often characterized by search and experience properties. Thus, Iacobucci and Ostrom (1993) propose that the evaluation of a service is more difficult than the purchase of a

good. Because of this difficulty, consumers are thought to determine the quality level being provided of a service purchase from cues in the service encounter environment (cf. Bitner 1992). Additionally, the encounter for a service may take longer than an encounter for a good; hence, there is more opportunity for the environment to matter.

Service Characteristics

Services provide benefits that can be characterized along a continuum (Figure 2.1), with search-based characteristics at one end, experience-based characteristics in the middle, and credence-based characteristics at the other end. Obtaining pre-purchase information and knowledge becomes increasingly more difficult as one moves from search-based services to credence-based services (Mitra, Reiss, and Capella 1999). Past scholars have observed that credence-based services have a higher degree of customization (Guiltinan 1987; Zeithaml 1981) and require personal involvement on the part of the service provider (Guiltinan 1987). A patient in need of psychotherapy may have a difficult time deciding between two therapists if the consumer has not previously encountered either therapist. This increased uncertainty in making a purchase associated with a lack of knowledge implies a greater perceived risk accepted by the consumer (Mitra, Reiss, and Capella 1999).

Search Qualities	Experience Qualities	Credence Qualities
Easy to evaluate		Difficult to evaluate
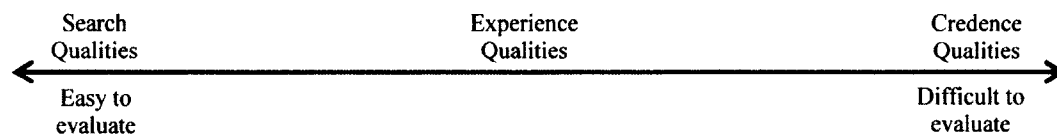
Figure 2.1 *Service Characteristics Attribute Continuum*

Search, Experience, and Credence Characteristics

In his seminal work, Nelson (1970) contends that consumer information regarding quality is limited, thus having profound effects upon the market structure of consumer goods. While his research is based in the consumption of goods rather than services, the characteristics used to describe both search and experience goods can be translated into the consumption of services. Adding an additional class of properties, Darbi and Karni (1973) introduce the term "credence" qualities, requiring additional costly information of the assessment of their value. In the services literature, consumers are found to have more pre-purchase knowledge of search-based services compared to pre-purchase knowledge of experience and credence-based services (Mitra, Reiss, and Capella 1999).

Nelson (1970) defines search characteristics more narrowly than Stigler (1961; 1962) to include attributes that can be evaluated prior to making a purchase. He contends that consumers know where each of the options available to them can be obtained, and that their information problem is that they must evaluate the options of utility subject to two restrictions: (1) The option must be inspected by the consumer, and (2) that inspection must occur prior to purchasing the brand. Search-related services are not likely to be tailor-made for each customer and are not likely to require special judgment in the delivery of the service (Guiltinan 1987). The standardized nature of search-based services as compared to credence-based services makes it possible for a customer to evaluate alternatives and have knowledge about potential buying consequences before making a purchase decision. Thus, in a search-based service, the customer is cognitively aware of the service features (i.e., more knowledgeable) before a decision to buy is made (Mitra, Reiss, and Capella 1999). For example, an auto insurance policy is classified as a

search-based service because the consumer is aware of and can evaluate specific and consistent attributes of differing auto insurance policies before selecting one for purchase. While the auto insurance policy is created for a specific consumer, the elements that comprise the policy are standard in nature and do not require special judgment in the delivery of the service.

Experience characteristics are attributes that can be evaluated only after purchase and consumption have occurred (Nelson 1970). Developing a theory for experience goods, Nelson (1970) reasons that prior to using a brand, the consumer knows the price but not the quality. Once the consumer has experienced the brand, a level of quality can then be associated with the purchase. For example, a haircut can be classified as an experience-based service because the consumer can only evaluate the quality of a haircut after the service has been complete. Upon entering the hair salon the customer knows the price of the service, but not the associated quality. Once the haircut has been purchased and consumed, the customer is able to evaluate the full set of characteristics associated with the purchase.

Extending Nelson's (1970) framework, Darbi and Karni (1973) define credence characteristics as attributes that cannot be judged confidently by the consumer even after purchase and consumption occur. According to Darby and Karni (1973, p. 69), "credence qualities arise whenever a good is utilized either in combination with other goods of uncertain properties to produce measurable output or in a production process in which output, at least in a subjective sense, is stochastic, or where both occur." Services are more often associated with credence qualities than either search or experience qualities due to the nature of the purchase. Purchasing a credence-based service is

somewhat riskier than a search or experience service because consumers are not as confident in their abilities to judge the quality of the service (Murray and Schlacter 1990). In the purchase of a service, the consumer is often purchasing an intangible item, meaning there is no physical product attached. For example, a dental procedure such as a preventative fluoride treatment is difficult for a consumer to evaluate even after consumption. The consumer is unable to assess the specific attributes involved with the fluoride treatment. The patient's teeth will look and feel the same both before and after the treatment is complete. When a tangible product is purchased with a credence service, such as a dental crown, the consumer still cannot fully evaluate the product since the intricacies and peculiarities of the crown are not known. After consumption, having the crown procedure completed, the consumer is unable to evaluate the quality of the service provided by the particular provider as compared to a different provider completing the same crown procedure. In both procedures, a dental crown was placed in the consumer's mouth, but the consumer would be unlikely to give discernable characteristics as to the quality of one purchase over the other purchase.

Thus, the amount of information available to consumers prior to making a purchase is varied, with credence characteristics having the lowest available knowledge and search characteristics having the highest available knowledge (Nelson 1974). Consumers making a purchase involving credence characteristics are more likely to be relatively skeptical before the purchase is complete and possibly even after the purchase is complete. To evaluate credence characteristics, consumers may be more likely to evaluate the service provider as a basis for the level of acceptance of the purchase. The provider may be the only tangible cue of the transaction, and what signal the consumer

has to base the judgment of the service rendered. Thus, consumers will use the service provider's characteristics to drive the evaluation of the service outcome.

Service providers play an important role in customers' evaluations of service quality (Heskett, Jones, Loveman, Sasser, and Schlesinger 1994; Mattson 1994; Tansuhajm, Randall, and McCullough 1988). In dyadic service encounters (involving a service provider and customer), the customer will form perceptions using the employee's personal appearance, the customer's pre-established expectations, and the surroundings of the encounter (Lockwood and Jones 1989). Given that services are often intangible in nature, personality profiles of service providers will also influence a customers' perception of service quality (Harris and Fleming 2005). Additionally, individuals may use physical attractiveness (PA) as the predominant basis to form impressions and make judgments about the service provider if information is scarce (Berger, Fisek, Norman, and Zelditch Jr 1977).

Service Quality

Service quality is a measurement of the result of the comparison that customers make between their expectations of a service and the perception of how the service was performed (Lewis and Booms 1983; Lehtinen and Lehtinen 1982; Gronroos 1984; Parasuraman et al. 1985, 1988, 1994). Service quality is viewed as a crucial factor in evaluating overall performance of an organization and is often valuable in gaining a competitive advantage by differentiating itself from that of the competition (Rapert and Wren 1998). In the service quality literature, expectations are defined as "a normative standard of future wants," (Boulding, Kalra, Staelin, and Zeithaml 1993, p. 8) indicating normative or ideal standards signify enduring wants and needs that remain unaffected by

the full range of both marketing and competitive factors. Thus, normative expectations are more stable and are viewed as representing the service the market oriented provider must continually strive to offer (Zeithaml, Berry, and Parasuraman 1993).

Gronroos (1984; 1990) proposes a model highlighting the roles of both technical (output) quality and functional (process) quality (Figure 2.2) that occurs prior to, and results in, outcome quality. Technical quality refers to what is delivered to the customer, such as the hair cut received at the salon, the medical advice received from the doctor, or the food prepared by the personal chef. Functional quality is related to the process of transferring the end result to the customer. Functional quality affects both psychological and behavioral aspects including accessibility to the provider, the way the providers perform tasks, how providers communicate, and how the service is finished. Thus, the output (technical difficulty) is more easily evaluated objectively, whereas it is more difficult to do so with functional quality. In this model, customers hold an image of the firm, which impacts quality by itself and also functions as a filter. Thus, the perceived quality is the result of the overall evaluation of what was expected and what was actually experienced, accounting for the influence of the image held of the firm.
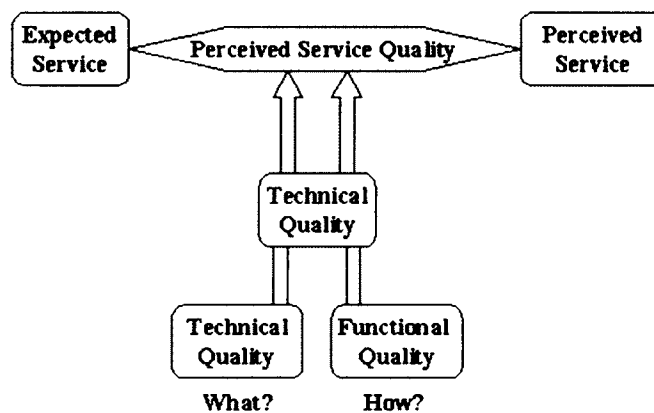
Figure 2.2 *The Service Quality Model (Gronroos, 1984)*

SERVQUAL (Parasuraman et al. 1985; 1988; 1994) operationalizes the service quality construct using qualitative and quantitative research following generally accepted psychometric procedures. The model is focused on strategies and processes that firms are able to employ, driving excellence in service while still maintaining customers as the central focus (Parasuraman et al. 1985). Figure 2.3 provides the gaps model and how service quality brings together a customer focus and service excellence in a practical, structured way (Parasuraman et al. 1985). The original construction consisting of ten components of service quality was later reduced to five dimensions (Reliability, Assurance, Tangibles, Empathy, and Responsiveness), resulting in the 22-item instrument most widely used to measure service quality. From this, researchers are able to measure the performance-expectations gap (Gap 5, Figure 2.3).
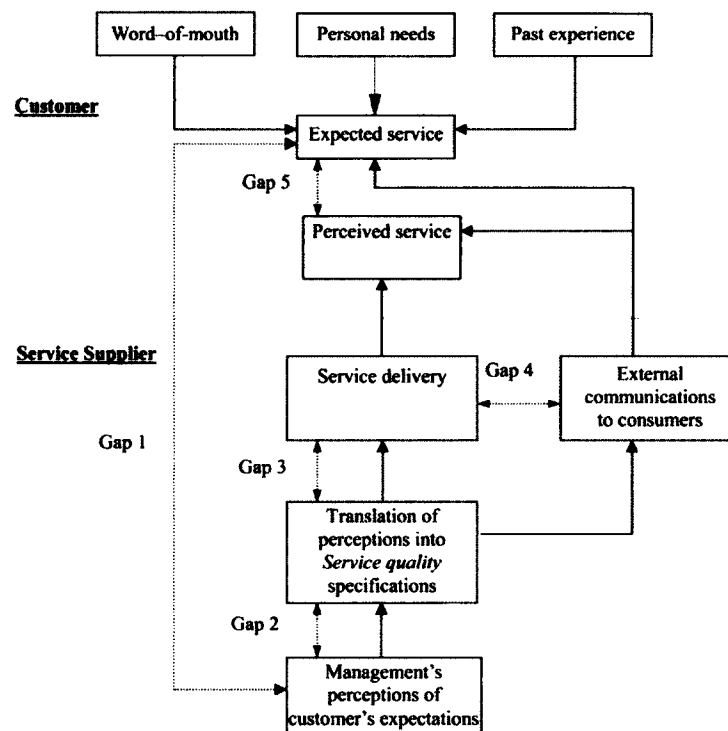
Source: Parasuraman et al. (1985)

Figure 2.3 *Gaps Model*

Gaps Model – Zone of Tolerance

From further development of the expectations side of the gap model, Berry and Parasuraman (1991) and Zeithaml, Berry, and Parasuraman (1993) find that expectations can exist at two levels: the desired level and the adequate level. Between these two levels exists a zone of tolerance (Figure 2.4) indicating the area of difference that the consumer is willing to accept. The gap occurs within the model when the customer is not satisfied with the service experience. The idea of disconfirmation of expectations drives the satisfaction/dissatisfaction paradigm. Figure 2.4 ("Nature and Determinants of Customer Expectations of Service") (Zeithaml, Berry, and Parasuraman 1993) measures customer expectations of service that clarifies the distinction between customer satisfaction and service quality assessment within a single framework. Within this framework, three levels of customer expectations are differentiated: (1) desired service, reflecting what a consumer wants; (2) adequate service, reflecting the standard that the customer is willing to accept; and (3) predicted service, reflecting the service level that the customer believes is likely to occur.
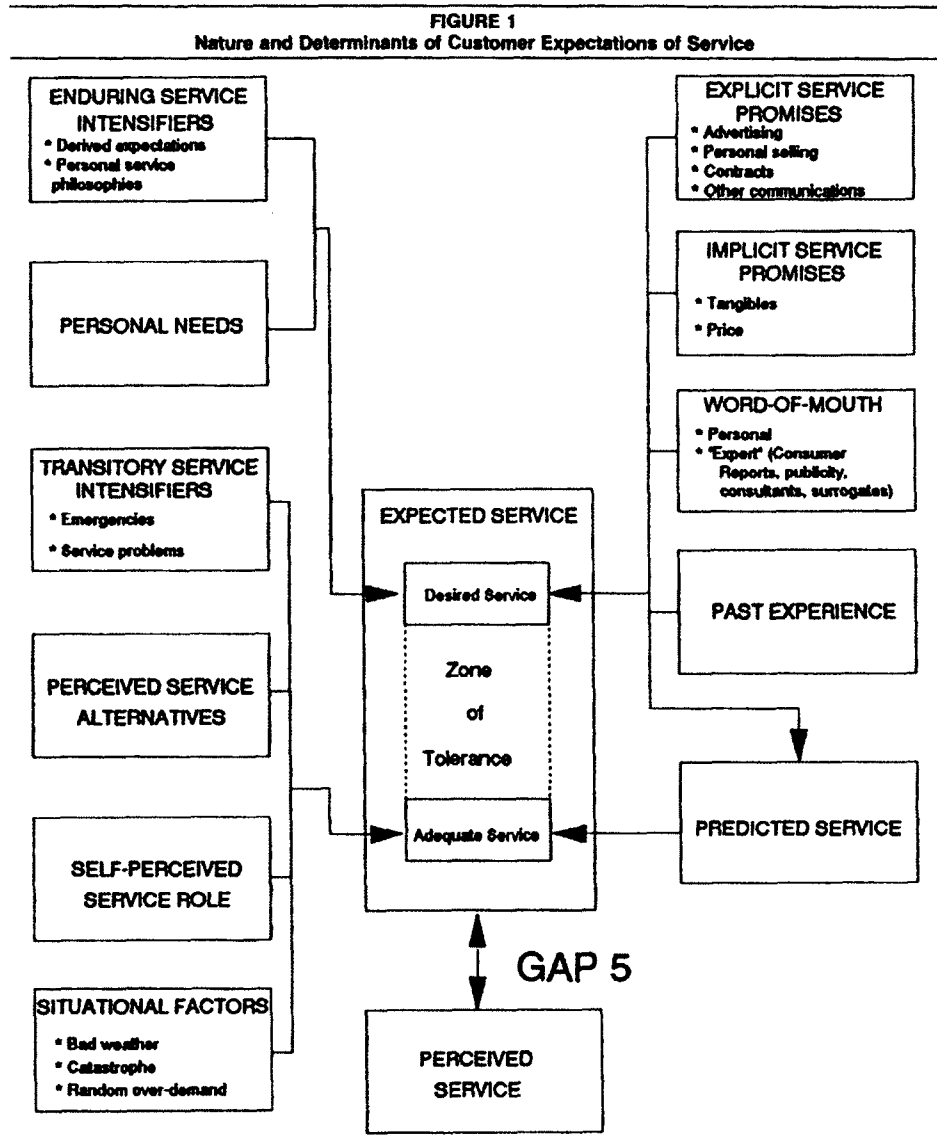
Note: (Zeithaml, Berry, and Parasuraman 1993)

Figure 2.4 *Nature and Determinants of Customer Expectations of Service*

Desired service is formed by both enduring service intensifiers and personal needs. Enduring service intensifiers are individual, stable factors leading the customer to heightened sensitivity to a service and are composed of two factors: derived service expectation, where a customer derives expectations by another party, and personal service philosophy, where a customer holds a generic attitude regarding the service and

service providers (Zeithaml, Berry, and Parasuraman 1993). The second factor, personal needs, includes the physical, social, and psychological well-being of the customer.

Adequate service is formed by five factors: (1) transitory service intensifiers, which are short-term individual factors leading to heightened sensitivity to service, (2) perceived service alternatives, which are customer perceptions for the degree to which they can obtain better service elsewhere, (3) customer self-perceived service roles, meaning the degree to which the customer influences the level of service they receive, (4) situational factors, which are the service-performance contingencies beyond the service provider's control, and (5) predicted service (Zeithaml, Berry, and Parasuraman 1993).

Additional factors influence both the desired service level and the adequate service level. Four main factors influence the desired service level and the predicted service level, which then influences the adequate service level: explicit promises include marketing efforts of the firm, implicit promises include tangibles and price, word-of-mouth includes both personal and expert communicators shaping expectations, and past experience that is relevant to the focal service (Zeithaml, Berry, and Parasuraman 1993).

Early research and managerial issues recognized within the customer gap related to the way customers learned about services and how they formed expectations with the 'intangible' nature of services that they were unable to see or try prior to making a purchase. The increase in use of technology has changed what customers expect from technology driven services and does not fit the original model of service expectations (Parasuraman, Zeithaml, and Malhotra 2005). Customers have the ability to search the web, view photos, and experience the service through virtual tours before making a purchase (Bitner, Zeithaml, and Gremler 2010). Word-of-mouth communication has

changed regarding the way customers learn about and form expectations for service providers. Websites provide customer recommendations, shining praise, and even horror stories regarding almost any type of service available (Ward and Ostrom 2006), influencing customer expectations for the service and service provider prior to entering an encounter.

Service Classifications

In an effort to create mental ordering and classify a broad range of service industries, academics have developed service typologies (Cook, Goh, and Chung 1999). The earliest services typology was proposed by Judd (1964). In this typology services are classified by three main activities: rented goods services, owned goods services, and nongoods services. Following this classification, Rathmell (1974) proposed a classification scheme based on the type of seller, type of buyer, buying motives, buying practices, and degree of regulation. However, this latter classification has no direct application to services because the same classification schemes could be applied to goods (Cook, Goh, and Chung 1999). Over time the evolvement of services typologies allows researchers to gain an appreciation of the nature of the discipline and provide theoretical contributions through new typology development. The purpose of the proposed typologies is to focus the complexities of services by creating service criteria that reflect core service aspects that reach past the narrow industry boundaries (Cook, Goh, and Chung 1999). Thus, the typologies assist managers in the development of meaningful strategies for specific service contexts as well as providing researchers a foundation for theory development within a specific service classification (Cook, Goh, and Chung 1999).

Many diverse classification schemes have emerged with the development of service typologies (e.g., Bowen 1990; Haywood-Farmer 1988; Kellogg and Chase 1995; Lovelock 1983; Shostack 1977; Mersha 1990; Silvestro, Fitzgerald, and Johnston 1992). In 1999, Cook, Goh, and Chung identified thirty-nine different service typologies in which little synthesis and integration was found. Issues addressed in the schemes relate to classifying, identifying, or quantifying services and/or goods and services (Kellogg and Chase 1995; Lovelock 1983; Shostack 1977; Silvestro, Fitzgerald, and Johnston 1992), service strategy (Bowen 1990; Lovelock 1983), service design (Bowen 1990; Haywood-Farmer 1988; Shostack 1987), and service system efficiency (Mersha 1990), among others.

The most evident service classification scheme incorporating both service providers and customers is found in Mills and Margulies (1980). These authors develop their typology centered on service organizations based on the critical relationship between the customer and the service employee. Three basic types of service organizations are distinguished: maintenance-interactive, task-interactive, and personal-interactive and are based on high, medium, or low combinations of seven personal interface variables. For success to occur in the maintenance-interactive organization, the image of stability must be projected. This success requires that the service-delivery activities go through few changes and be routinized (e.g., banking, financial services). The task-interactive organization achieves success through a concentrated relationship between the service employee and customer focusing on the various techniques used to solve problems. The emphasis lies in accomplishing the tasks needed to be performed (e.g., advertising, engineering). The personal-interactive organization centers on the

personal nature of the problem as brought to the service employee by the customer. Attention is concentrated on improving the customer's direct intrinsic and intimate well-being.

The typology uses seven personal interface variables to type each of the previously mentioned organizations: information, decision, time, problem awareness, transferability, power, and attachment. According to Mills and Margulies (1980), these dimensions provide information for categorizing the service organization as well as the structuring and operating of the entities within each type of organization. Participation by the customer fluctuates depending on the type of service being completed as well as the associated task requirements in the service encounter and the customer's skill and motivation level to participate in the service (Mills and Margulies 1980). Limitations are found in that the three types of service organizations cannot cover all possible combinations of the seven personal interface variables. For example, it is possible for a service provider to fall into more than one of the three alternative types of organizations (Larsson and Bowen 1989; Snyder, Cox, and Jesse 1982). A new typology in the services literature is needed to more specifically define the attributes of the service provider, and what differentiates the individual service provider, despite the type of service organization for which they are involved.

Research on Stereotypes

Stereotype Definition

Historically, the development and perpetuation of stereotypes has been viewed as motivational, sociocultural, and cognitive processes (Ashmore and Del Boca 1981). Motivational bases for stereotypes involve intrapsychic needs of the perceiver. A

sociocultural orientation to understand stereotypes focuses on the role of social learning processes where stereotypical beliefs are acquired through socialization, media influences, and the like, and are maintained through significant others and important reference groups. Cognitive processes are involved as the natural result of the perceiver processing information about other people. From the cognitive perspective, a stereotype is "a cognitive structure or schema that contains the perceiver's knowledge, beliefs, and expectation about a human group" (i.e., a "type" of person) (Hamilton and Trolier 1986, p. 133). For example, a perceiver may view a doctor as a "type" of person who has extensive medical knowledge, believing that he or she possesses an ability to diagnose the illness, and has high expectations that the doctor will be able to treat an illness by applying the appropriate technology. In the social cognition literature, research has focused on the fundamental cognitive processes of stereotypes with respect to formation, use, and maintenance (e.g., Fiske 1998; Hamilton and Sherman 1994; Hamilton, Stroessner, and Driscoll 1994; Macrae, Stangor and Hewstone 1996). Research indicates that in the formation of stereotypes, individuals often make extreme trait and evaluative judgments about group members, even when very little information is available (e.g., Ford and Stangor 1992; Judd and Park 1988), and distinguish limited within-group variability (e.g., Linville, Fischer, and Salovey 1989; Park and Hastie 1987). Thus, a stereotype may be formed and maintained with little information as a basis, and most group members may be seen to have the same trait characteristics. Once formed, stereotypes often serve as a primary basis for judging groups and their respective members (e.g., Kunda and Sherman-Williams 1993; Sagar and Schofield 1980); subsequently, stereotyped judgments tend to be made quickly (e.g. Dovidio, Evans, and

Tyler 1986; Macrae, Bodenhausen, and Milne 1995). Stereotypes (along with prejudices) are widely studied in the psychology literature and include, but are not limited to, gender (Hoffman and Hurst 1990), age (Brewer, Dull, and Lui 1981), ethnic orientation (Gilbert and Hixon 1991), sexuality, race/ethnicity, social class (Fiske 1982), occupation (Pratto and Bargh 1991) and immigrant status.

Social stereotypes are "widely shared assumptions about certain types of people that are represented cognitively as extensive, well-organized categories or schemata" (Andersen, Klatzky, and Murray 1990, p.193). Social stereotypes capture the role expectations of a specific type of person. Social stereotypes can be based on nearly any characteristic that describes a person, including age, sex, religion, ethnicity, and occupation (Babin and Harris, 2014). Role expectations of a person of a certain type are captured by the stereotype, and consumers generally like when the service provider matches with an existing stereotype (Babin and Harris, 2014). Thus, it can be seen that in a services setting, consumers find comfort in a service provider matching the socially defined stereotype. For example, a nurse who looks like a nurse and is caring and compassionate like a "nurse" will be better received than one who is not in a medical uniform and has a "flat" personality. However, when the service provider does not fit the social stereotype, the consumer's behavior may be altered and result in a completely different service encounter outcome.

An occupational stereotype provides consumers a theory that allows for predictions about a specific individual in the absence of individual knowledge or experience (Matta and Folkes 2005). Stereotyped groups include occupations, such that people hold knowledge, beliefs, and expectations regarding typical characteristics of

many service providers (e.g., the typical physician characteristics) (Weber and Crocker 1983). Learning about service providers can be regarded as a process whereby the consumer acquires a theory about a particular group of service providers (e.g., expectations about physicians) and generalizes the theory to all individuals who provide the same service (e.g., to all physicians across all doctors' offices). This assumption is updated with additional new information (e.g., meeting a specific physician suggests ways that his practice is different from others).

Schema

The characteristics that comprise the service encounter provide cues that enable the consumer to categorize, evaluate, and react to the specific service being offered. A schema is "some generalized cognitive framework that an individual uses to impose structure upon, and impart meaning to, social information or social situations in order to facilitate understanding" (Giola and Poole 1984, p. 449-450). A schema provides a knowledge base serving as a guide to interpret information, actions, and expectations (Graesser, Woll, Kowalski, and Smith 1980; Rumelhart and Ortony 1977). Generally speaking, schemata guide perception, action, and thought regarding attributes about the most usual instances (Rumelhart and Ortony 1977). In a general sense, a schema is a stored framework of cognitive knowledge representing information about a topic, a concept, or a specific stimulus, including its attributes and the relations between the attributes (Fiske and Linville 1980) The influence of congruity has been associated with the transfer of affect to the object from the schema (Fiske 1982) and to metacognitive experiences of either satisfaction or frustration in the perception of fit between the object

and the schema that carry over to the evaluation of the object (Myers-Levy and Tybout 1989).

After repeated exposure to a consistent schema, this schema becomes the "stereotype" and becomes stronger with each validating instantiation. To illustrate, a consumer who frequents fast food establishments is continually helped by young male servers who look unclean/unkempt, wear ill-fitting clothing, and have at least one piece of skin art. This schema, associated to the fast food industry and the relating attributes of the server, has now become a stereotype of fast food restaurants. After continual exposure to the server stimulus, the consumer now holds a stereotype of fast food workers.

The activation of a stereotype should have similar effects as the activation of a schema. When encountering a stranger, our first thought is to ask their occupation. Knowing what the person does for a living activates a schema for understanding and creates a set of role expectations (Babin, Boles, and Darden 1995). In a social situation, individuals may find common ground in terms of conversation through activation of the occupational schema. If an individual learns that an acquaintance is a garbage collector, the ensuing discussion will most certainly take a different behavioral and perceptual path than if this individual had been a professor. Because schematic triggers frequently frame social exchanges, researchers are interested in their effects. In the service environment, the service provider is the most prominent stimulus associated with the context, and the most likely individual to have a schemata or stereotype attached. When customers enter a service context, the occupation is typically known and sets the tone for the delivery of the service based on congruity to the schema.

Hierarchical Nature of Schemas

The hierarchical nature of schemas is important, given that specific levels may be more salient and have greater influence in the information environment (Rosch 1978). Rosch and colleagues (1976; 1978) introduce cognitive structure in semantic memory through the use of natural objects. They propose that natural object categories are organized in a hierarchical fashion. Figure 2.5 illustrates the hypothesized beverage hierarchy put forth by Myers-Levy and Tybout (1989) using Rosch's (1978) hierarchical nature of schemas and Mandler's (1982) schema congruity theory. At the highest level are superordinate categories. Here, members are distinguished from one another on key attributes, but share few features. The next level down comprises basic categories, where groups have a larger proportion of shared-within compared to shared-between category attributes. The term "basic" indicates attributes that are thought to provide the greatest between-category discrimination and are most often used to categorize both natural and social objects. The lowest level in the hierarchy, the subordinate level, requires identification of a single or small number of attributes to discriminate objects that share a large number of other features.

FIGURE 1

A HYPOTHETICAL BEVERAGE HIERARCHY

Figure 2.5 *Hypothesized Beverage Hierarchy (Myers-Levy and Tybout 1989)*

Service providers can also be classified by hierarchical schemas. For example, individuals not only possess a schema for "healthcare professionals," but also for individual professions within the healthcare category that provide more meaning and use given the environmental situation. Figure 2.6 illustrates the hierarchical nature of healthcare professionals. The superordinate level (healthcare professional) distinguishes members on key attributes. The basic level is the one most often used to categorize objects. Individuals in need of a healthcare professional may think of this level first, and then select a more specific service provider. The subordinate level allows for members to share the greatest number of features. Thus, in the healthcare example, the psychiatrist is most closely associated with the psychologist.

Subordinate	Basic	Superordinate	Basic	Subordinate

Surgeon

Family Practitioner

Doctor

Registered Nurse

Nurse

Licensed Practical Nurse

Healthcare Professional

Lab Technician

Radiologic Technologist

Medical Sonographer

Therapist

Psychiatrist

Psychologist
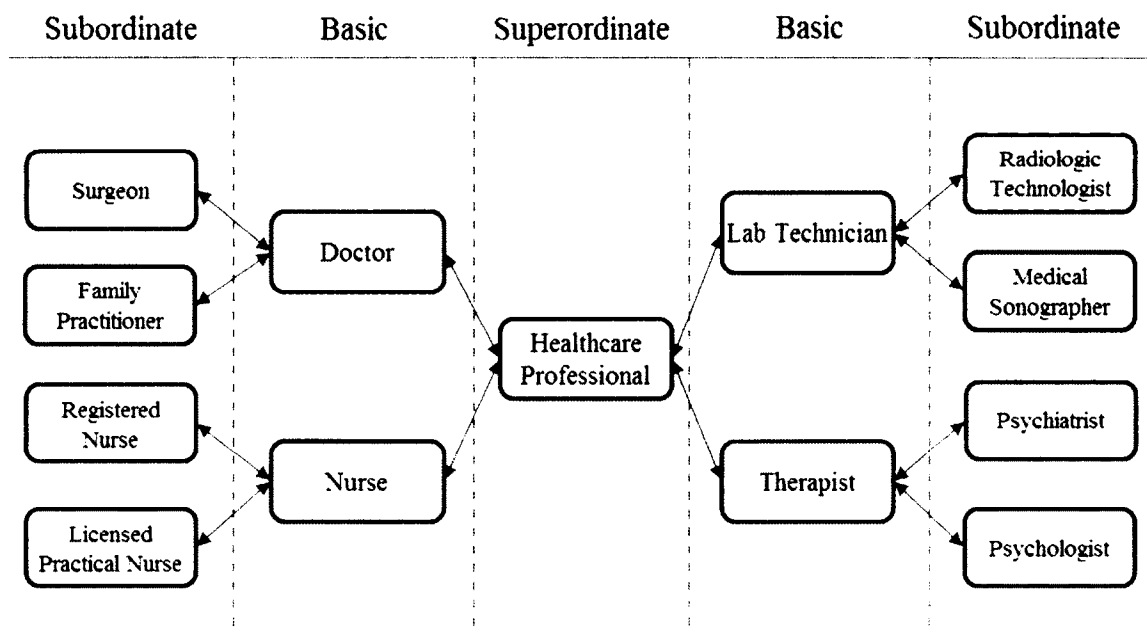
Figure 2.6 *Hierarchical Nature of Schemas*

Mandler (1982) theorizes that the valence and extremity of affective responses can be influenced by responding to different levels of schema congruity. Incongruity

refers to the extent that structural correspondence is achieved between the complete configuration of attributes associated with the object and the configuration of the specified schema (Mandler 1982). Mandler proposes that schema congruity leads to a favorable outcome because individuals like objects to conform to their expectations and allow predictability. Because of this, schema congruent objects are less noteworthy and are unlikely to prompt extensive cognitive elaboration. Next, Mandler proposes that moderate incongruences are those that can be resolved successfully. The novelty of the incongruence creates arousal, and greater cognitive elaboration is needed to create a resolution. Moderate incongruences are viewed as "interesting and positively valued" (Mandler 1982, p. 22), suggesting that responses are viewed more positively than ones elicited by schema congruency.

Lastly, extreme incongruity cannot be resolved or can only be resolved if essential changes are made to the existing cognitive structure (i.e., a redefinition of the selected schema). Extreme incongruity generates cognitive elaboration, but may lead to frustration rather than resolution. While moderate incongruity elicits positive evaluations, extreme incongruity often elicits more negative evaluations. Mandler hypothesized that extreme incongruity will result in one of two processing responses and numerous evaluative outcomes. If assimilation is not possible, restructuring or accommodation may be attempted for the cued schema. If accommodation is not successful, the affective evaluation will be strongly negative due to the "unavailability of an appropriate response to the environment" (Mandler 1982, p. 24). However, if accommodation is successful, the "resultant phenomena affect will be intensely positive or negative, depending not on the fact of arousal but on the current state of evaluation"

(Mandler 1982, p. 24). Thus, according to Mandler, a non-monotonic relationship exists between schema congruity/incongruity and evaluation, where the process of responding to moderate incongruity leads to a more favorable evaluation than the process of responding to either congruity or extreme incongruity. Figure 2.7 provides an overview of schema congruity with an example using a services context.

	Congruity (Doctor)	Slight (Physicians Assistant)	Successful Accommodation (Nurse)	Unsuccessful Accommodation (Veterinarian)
Affective Value:	Positive	Positive	Positive	Negative
Intensity:	0	+	++	-
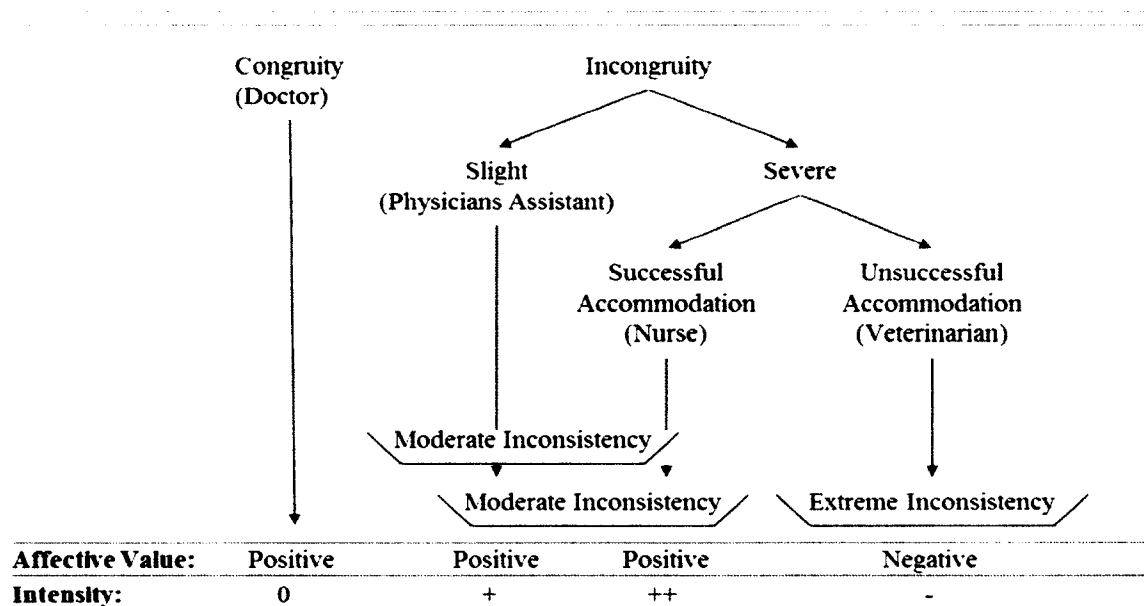
Figure 2.7 *Schema Incongruity*

Prior information plays a critical role in schema congruity effects. In their work, Fiske and Taylor (1991) find that individuals working with impoverished prior knowledge are likely to be more sensitive to schema-inconsistent information, whereas those individuals with well-developed prior knowledge have the ability to notice and use both schema-consistent and schema-inconsistent information.

In support of Mandler's (1982) theory, Myers-Levy and Tybout (1989) find consistent results when evaluating mismatch outcomes between schema-level representations and new product attributes. The authors find that a more positive product

evaluation results when a moderate mismatch between the schema representation and the product description occurs than when there is a match or extreme mismatch. Additional support is shown by Ozanne, Brucks, and Grewal (1992) when examining how product-category schemas affect information search. The authors report an inverted U relationship between the level of information search and the degree of mismatch between the product and the schema for the product category, indicating that "the highest level of information search and processing effort was with the moderate discrepancy stimuli" (Ozanne, Brucks, and Grewal 1992).

Schematic Response

When information matches category-based knowledge, consumers rapidly reach thoughts related to the products' category and have fewer attribute thoughts. When information mismatches, consumers engage in more analytical processing and take longer to form an impression of the product. Even with discrepant information, consumers still attempt to categorize the product to form an impression, but they use more subordinate level categories. The subtyping is evident that processing of new information draws heavily upon consumers' prior knowledge about the category. Thus, the piecemeal and categorization approaches to evaluation seem inextricably mixed (Sujan 1985). When encountering counterstereotypical service providers, perceivers often individuate the disconfirmation, classifying it as an isolated or fenced-off incident, thus dismissing it (Kunda and Oleson 1997) as opposed to adjusting the stereotype.

According to Fiske (1982), an affective response is determined by schematic match. The degree to which an instance is perceived to fit with the associated schema will receive the appropriate affect linked to that category. Otherwise, the instance will

receive a level of moderately positive affect, by default, as it waits possible categorization as an appropriate example of something else.

To assess schema-triggered affect, Fiske, Beattie, and Milberg (1981) conducted a study using the old flame phenomenon. The study assessed the contents and affect linked with old flames, evoking the schema on two dimensions: personality profile or photograph. The authors hypothesized that subjects would react positively to a total match (both personality profile and photograph), react with little affect to a total non-match, and were not sure how subjects would react on partial matches. Findings indicate that as hypothesized, total matches to personality and appearance elicited high positive affect and little negative affect. Total non-matches elicited little positive affect and little negative affect, as predicted. In the partial match condition, moderate positive affect was seen, especially when the match occurred on appearance and not personality. Additionally, partial matches also elicited moderate negative affect. The authors provide a straightforward explanation for the results, indicating that when a new individual is a good match to one's prior category knowledge, the individual elicits the affect and actions associated to the schema.

Koernig and Page (2002) find that respondents generate more total thoughts when the stimulus person does not match the category than when the stimulus person matches the category. This finding provides support for schema theory in that the mismatch between stimulus person and category forces the respondent to generate additional thoughts regarding the appropriate category classification of the stimulus person.

Scripts

For frequently encountered and routine services, role and script theories suggest both customers and employees share equivalent views of their roles in the service exchange and the expected sequence of events and behaviors (Bitner, Booms, and Mohr 1994). A role is the behavior associated with a socially defined position (Solomon et al. 1985), and role expectations are the standards for role behavior (Biddle 1986). Roles and role expectations are often well defined for both the customer and service provider in many routine service encounters where both the customer and the service provider know what to expect from one another.

Scripts are schematic knowledge structures held in memory describing events or behaviors indicative of a particular context. They enable understanding and provide a guide to behavior appropriate to the situation (Gioia and Poole 1984). Scripts are held in memory in a prototypical fashion, consisting of an abstract set of representative features that define members of the appropriate category (Cantor and Mischel 1977; 1979; Tsujimoto 1978). Weak scripts resemble other similar forms of cognitive structures which organize the expectations about the attitudes of such people (Abelson 1976). Weak scripts organize expectations about behaviors, but they do not specify the exact sequence of such behaviors (e.g., lazy individuals or introverts).

Strong scripts contain expectations for the occurrence of events as well as the progressive sequence of such events (Abelson 1976). Strong scripts occur most frequently in stereotypical and ritualistic occasions (e.g., the sequence of events for a job interview or the order of an awards ceremony).

A "prototype" is an incorporation of previous category-related experiences. The prototype is a hypothetical person representing traits and behaviors associated with the selected group through experience (Fiske and Kinder 1981). Several characteristics come to mind when thinking of a prototype for a particular category. The alternate schema known as an "exemplar" is the single best representation for a particular category based on previous experience (Fiske and Kinder 1981). An exemplar can be different for different people. To illustrate, when asked to think about a doctor, an individual can form two separate schemas for this service provider. A prototype is a conglomeration of behaviors associated with the category for the service provider. This information is obtained from previous encounters with doctors, and the prototypical image is not of a particular doctor the individual knows, but rather of a doctor who possesses the qualities that are consistent with being a doctor. Thus, a prototypical doctor may wear scrubs, a white lab coat, and have a stethoscope. The doctor is probably well groomed, has good hygiene, and is in relatively good health. An exemplar is a specific doctor that comes to mind that has been encountered in the past. An exemplar could be the family practitioner an individual uses or a surgeon who just performed open-heart surgery. The exemplar may not have the same qualities a prototype has, but best represents the doctor schema for the individual.

Consumers compare new and unknown individuals to either a prototype or exemplar by comparing the features of the encountered individual to the features that are found in the schema. The quantity of similar or dissimilar features allows someone to classify an individual into one schema over another by assessing their comparison to the held prototype or exemplar of each category.

A "protoscript," is a generic script for a class of situations (e.g., corporate board meetings). When a new situation shares common elements with previous experiences, a comparison-to-prototype process is cued, enabling the protoscript to serve as a basis for responding to the current situation (Gioia and Poole 1984).

Stereotypes in Marketing

Stereotypes in marketing are seen in both the products and services literature. Stereotypes include, but are not limited to, country of origin regarding product evaluation (Maheswaran 1994), corporate image (Tucker 1961), relationship marketing (Palmatier, Dant, Grewal, and Evans 2006), physical attractiveness (Luoh and Tsaur 2009; Koernig and Page 2002), gender (Matta and Folkes 2005; Fischer, Gainer, and Bristor 1997), age, and race.

Luoh and Tasur (2009) find support for the "what is beautiful is good" stereotype described by Dion, Berscheid, and Walster. (1972) and Miller (1970). In a 2 x 2 between-subjects study using scenario of service quality (favorable vs. unfavorable) and appearance of server (attractive vs. average), participants rated five dimensions of service quality (tangibles, reliability, responsiveness, assurance, and empathy). The PA stereotype of servers in fine-dining restaurants (study conducted in Taiwan) is found to influence customers' perceptions of two service quality dimensions: responsiveness and assurance (Luoh and Tsaur 2009). Regardless of the condition (favorable or unfavorable), customers held higher perceptions of the service quality when an attractive waitperson was used rather than an average-appearance waitperson.

In a separate and prior study, Koernig and Page (2002) update conventional wisdom from "what is beautiful is good" to "what is expected is good." In a 3 x 2

between-subjects study using service provider physical attractiveness (high/moderate/low) and type of service (attractiveness related / attractiveness unrelated), participants evaluated their attitude toward the service provider (liking, perceived trust, perceived expertise), perceived satisfaction, perceived quality, intended loyalty, and purchase intent. A significant interaction between attractiveness and product type was found for perceived trust, perceived expertise, and perceived quality, indicating attractiveness effects differ depending on the type of service being evaluated. Additionally, significant effects were found for perceived trust, expertise, and quality, indicating attractiveness effects differ depending on the nature of the service. No effect was found for perceived satisfaction, purchase intent, or intended loyalty. Thus, it is shown that the type of service moderates the effects of service provider physical attractiveness.

The services literature provides evidence that the sex of a service provider is a salient dimension in the servicescape for some customers. Fisher, Gainer, and Bristor (1997) conduct a series of studies in the context of fast food restaurants, hair cutting salons, and dental offices building on research of service quality and the relationship between consumption and gender. In fast food restaurants, the stereotype is proposed favoring women servers over men. Findings indicate that men rate pictures of male servers lower than pictures of female servers on the dimensions of reliability, assurance, and empathy (consistent with the stereotype) but higher on dimensions of tangibles and responsiveness (contrary to the stereotype). Women rate pictures of male servers higher than pictures of female servers on the reliability dimension (contrary to the stereotype) and did not differ on picture ratings on the dimensions of tangibles, responsiveness,

assurance, and empathy. These mixed findings may be a result of the fast food stereotype resting on additional factors such as age, and race, or other factors than gender alone.

In the hair cutting salon context, significant findings show both males and females rate pictures of female servers higher than pictures of male servers on the dimensions of reliability, responsiveness, and empathy (consistent with the stereotype) when the stereotype favored women. In the dental office context, significant findings show both males and females rate pictures of female servers higher than pictures of male servers on the dimensions of responsiveness, assurance, and empathy (consistent with the stereotype) when the stereotype favored women. Thus, the server-gender stereotype affects the assessment of service quality, but the impact is inconsistent regarding who is affected (men versus women), what service quality dimensions are affected (reliability, assurance, tangibles, empathy, and responsiveness), and what overall impact the effect has.

In a series of three studies, Matta and Folkes (2005) examine inferences about service providers, inferences about other service providers in the firm, and inferences about the firm relative to other firms when occupations were perceived as dominated by one gender or the other. The first study manipulates service-provider performance (mediocre vs. excellent), gender (stereotype to the service vs. counterstereotype to the service), and predominant gender for the service (female-dominated vs. male-dominated). Service provider occupation was manipulated as either a financial analyst or wedding planner. Evaluations for the individual service provider indicate more competence from the counterstereotypical service provider when excellent service is delivered than when excellent service is delivered from the stereotypical service provider, consistent with

expectancy-violation theory. Additionally, mediocre service from either service provider rendered similarly inferior competence, regardless of occupational stereotypicality (Matta and Folkes 2005).

The second study provides some explanation on the service provider's excellent service depicted in study 1. Participants respond to three open-ended questions including (1) an explanation for the level of service the provider delivered to customers, (2) whether the firm was similar to others firms providing similar service, and (3) whether the service delivered was superior to other firms. Consistent with Heit's (1998) suggestion that an incongruent group member produces more elaborate attributions due to the perceiver's larger efforts to generate an explanation of the individual's incongruent behavior, participants explaining excellent service from the counterstereotypical service provider used more words than those participants explaining the performance from the stereotypical service provider.

Stereotype Violations

Expectancy-violation theory (Jussim, Coleman and Lerch 1987; Jackson, Sullivan, & Hodge 1993) suggests that individuals who violate expectations of the selected group membership will be evaluated more extremely (in the direction of the violation) than those individuals who do not. Thus, individuals who possess characteristics more favorable (unfavorable) than expected should be evaluated more positively (negatively) than individuals with similar characteristics whom we expected to rate positively (negatively) all along (Jussim, Coleman, and Lerch 1987). Hence, a counterstereotypical service provider who behaves more positively than expected should be evaluated more positively than the stereotypical person who behaves equally as

positively. For example, a female automobile mechanic who delivers excellent service should be evaluated more positively than a male automobile mechanic because it is expected that women will not perform well in such an occupation.

The psychology literature provides support for expectancy-violation theory through the use of social judgments and category-based expectancy violations. Jackson, Sullivan, and Hodge (1993) examine stereotype effects on attributions, predictions, and evaluations as well as the relationships among the different types of social judgments. In the first experiment, the authors manipulate stereotype consistency of an in-group or out-group target's behavior along with causal attributions, predictions, and evaluations of the target. White undergraduate student participants evaluated college admission applications for white applicants (in-group) and black applicants (out-group) based on either strong or weak credentials. The authors hypothesize stereotype-consistent behavior for white applicants with strong credentials and black applicants with weak credentials and stereotype-inconsistent behavior for white applicants with weak credentials and black applicants with strong credentials. In alignment with expectancy-violation, findings indicate black applicants with strong credentials were evaluated more favorably than white applicants with strong credentials. Additionally, white applicants with weak credentials were evaluated more unfavorably than black applicants with weak credentials. The study is limited by the use of only white participants evaluating both white and black applicants.

Kernahan, Bartholow, and Bettencourt (2000) build on the work by Jackson et al. (1993) to assess the sequence of processes that follow from category-based expectancy violations and further examine extremity by utilizing perceivers from additional in-group

membership. The authors hypothesize that targets violating category-based expectations will prompt extreme affect-related evaluations in the direction of the target's valence. Additionally, the authors predict that category-consistent information should be attributed to ability whereas category-inconsistent information should be attributed to effort. Because affect-related evaluations are formative in the process, it is predicted participants will make affect-related evaluations more quickly than causal evaluations. Using three racial groups (Black, White, and Asian), research supports expectancy-violation theory in that a black applicant with strong credentials is evaluated more positively than the Asian and white applicants with strong credentials and the Asian and white applicants with weak credentials were evaluated more negatively than the black applicant with weak credentials. Supporting the addition to Jackson et al. (1993), affect-related evaluations were made more quickly than causal (ability, effort, and task) attributions and category-consistent behaviors were attributed to stable factors (ability and task), whereas category-inconsistent behaviors were more often attributed with unstable and external factors (effort).

In the marketing context, perceivers evaluating service providers will mostly occur from out-group membership. While participants may share common in-group characteristics such as race, ethnicity, age range, and the like, it is more probable that the perceiver will be classified as an out-group member compared to the service provider and the selected service occupation.

Expectancy disconfirmation was formed out of Sherif and Hovland's (1961) social judgment theory and Festinger's (1962) theory of cognitive dissonance and has roots in both the social psychology (Weaver and Brickman 1974) and organizational

behavior (Ilgen 1971) literature and is essentially two processes: the formation of expectations and the disconfirmation of the formed expectations through performance comparisons. Oliver (1980) believes that consumers form expectations of product performance characteristics prior to making a purchase. Additional purchases and product usage reveals actual performance levels of the product are then compared back to the expectation levels based on a better-than, worse-than heuristic. Negative disconfirmation is reached when the actual product performance is worse than expected, and positive disconfirmation is achieved when the actual product performance is better than expected. A simple confirmation occurs when the actual product performance is equal to the expected performance.

These two components of expectancy disconfirmation have been shown to have separate effects similar to those of Helson's (1964) adaptation level predictions (cf Oliver 1980). Disconfirmation judgments are made from a baseline of the expectation level where the higher (lower) an individual's expectation, the higher (lower) the subsequent satisfaction judgment will be. The disconfirmation effects have been thought to originate from their associated emotional experiences. Thus, the happiness emitted from a positive disconfirmation enhances a satisfaction judgment, and the disappointment from a negative disconfirmation decreases a satisfaction judgment. Additional research finds support for this paradigm (Bearden and Teel 1983; LaBarbera and Mazursky 1983; Oliver 1980; Swan and Trawick 1981), while mixed results are shown when only actual product performance is introduced (Churchill and Surprenant 1982).

In short, the expectancy disconfirmation framework suggests that satisfaction is a function of the degree to which expectations match, exceed, or fall short of product or

service performance. Satisfaction then is thought to become an immediate quality to antecedent judgments and as well as loyalty (Bitner 1990; Kasper 1988; LaBarbera and Mazursky 1983). At the end of the framework, firm performance is linked directly back to customer loyalty (Heskett, Sasser, and Hart 1990).

Stereotype Content Model

Stereotype content refers to the attributes that people think characterize a group. Research examining stereotype content focuses on what people think of others, rather than the motives and mechanisms involved in stereotyping (Operario and Fiske 2002). The Stereotype Content Model maps out how individuals perceive social groups based on the two dimensions of social perception: Warmth and Competence (Fiske, Cuddy, Glick and Xu 2002). The Stereotype Content Model allows for the description of characteristics that are not explicitly described regarding an individual associated with the selected group. The Stereotype Content Model is based on the idea that people perceive the world around them on the dimensions of competence and warmth. Each dimension answers a fundamental question: "What are the other's intentions toward me?" (Warmth) and "Is the other able to carry out their intentions?" (Competence). Warmth relates to helpfulness, sincerity, friendliness, and trustworthiness, whereas competence relates to efficiency, intelligence, consciousness, and skill (Fiske, Cuddy, Glick and Xu 2002).

The off-diagonal cells of the Stereotype Content Model depicted in Figure 2.8 contrasts a high level of warmth (competence) with a low level of competence (warmth). The combination of the two dimensions elicits a paternalistic stereotype (low competence/high warmth) portraying out-groups that are neither inclined nor capable to

harm members of the in-group or an envious stereotype (high competence/low warmth) depicting out-groups that are viewed as competent but not warm (Fiske, Cuddy, Glick and Xu 2002). The diagonal cells of the Stereotype Content Model represent wholly positive (negative) evaluations of the group.

Competence

Low   High

Paternalistic stereotype   **Admiration**

High   low status, not competitive   high status, not competitive

(e.g., housewives, elderly people,   (e.g., ingroup, close allies)
disabled people)

Warmth

Contemptuous stereotype   **Envious stereotype**

Low   low status, competitive   high status, competitive

(e.g., welfare recipients, poor   (e.g., Asians, Jews, rich people,
people)   feminists)

Figure 2.8 *Stereotype Content Model*

The major outcome of the initial studies conducted by Fiske, Cuddy, Glick and Xu (2002) shows that social groups spread out when crossing the two dimensions of warmth and competence. In the two-dimensional space, the groups were most often organized into four separate clusters located in separate quadrants when crossing the two dimensions: the warm-competent quadrant, the warm-incompetent quadrant, the cold-competent quadrant, and the cold-incompetent quadrant. Updating this original study on a representative U.S. sample, Cuddy, Fiske, and Glick (2007) found that important differences in content may exist in negative stereotypes and that stereotypes regarding

discriminated groups are not completely negative, but may contain a mixture of both positive and negative content.

The Stereotype Content Model is integrated into the marketing literature as seen through the Brands as Intentional Agents Framework (BIAF) (Figure 2.9). Kervyn, Fiske, and Malone (2012) propose that models of social perception developed in social psychology, specifically the Stereotype Content Model, can be used in understanding how consumers perceive and relate to brands.
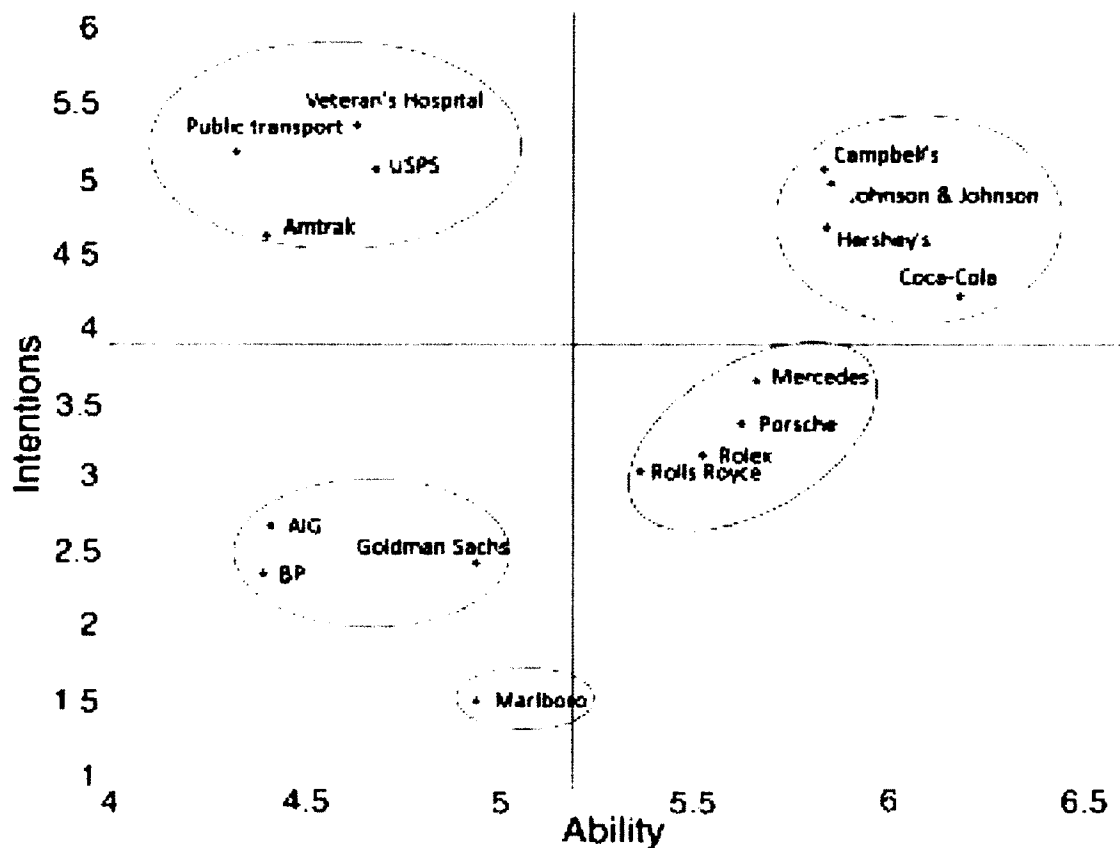
Figure 2.9 *Brands as Intentional Agents (As taken from Kervyn, Fiske, and Malone (2012))*

Thus, consumers are interested in a brand's delivery, its perceived ability or competence, as well as a brand's perceived intentions or warmth affecting how

consumers perceive, feel, and behave toward the given brand (Kervyn, Fiske, and Malone 2012). To transition from the Stereotype Content Model to the BIAF, the personality traits known as "warmth" and "competence" were adapted to "intentions" and "ability" illustrating the way perceptions imply a corporate entity as having intentions and the ability to enact those intentions (Kervyn, Fiske, and Malone 2012). Findings show that consumers do perceive, feel and behave toward brands in a manner that closely resembles those toward other individuals or social groups.

Service Provider Perception Framework

Thus, consumers are interested in a brand's delivery, its perceived ability or competence, as well as a brand's perceived intentions or warmth affecting how consumers perceive, feel, and behave toward the given brand (Kervyn, Fiske, and Malone 2012). To transition from the Stereotype Content Model to the BIAF, the personality traits known as "warmth" and "competence" were adapted to "intentions" and "ability" illustrating the way perceptions imply a corporate entity as having intentions and the ability to enact those intentions (Kervyn, Fiske, and Malone 2012). Findings show that consumers do perceive, feel and behave toward brands in a manner that closely resembles those toward other individuals or social groups.

If social groups and brands can be categorized according to stereotypical perceptions, it makes sense that the same can be done for service providers. Service providers can be classified according to similar dimensions as the Stereotype Content Model or the Brands as Intentional Agents Framework. While the cell make-up is different given the change in group structure (occupation), the overall notion can be repeated.

An "in-group" is a social group of which an individual psychologically identifies as being a member, whereas an "out-group" is a social group of which an individual does not identify. In this paper, service providers rendering service to individuals will be viewed as part of an "out-group" stereotype on the basis of occupation. This distinction between in-group and out-group is noted because of the inherent characteristics a person has with a specific occupation. For example, an individual who is not a doctor may draw one general prototype for this category due to the lack of extensive knowledge within the doctor category. However, given more specific information on a certain type of doctor (neurosurgeon), the individual would be able to differentiate characteristics associated to all doctors and those specifically attributed to a neurosurgeon.

Because the Service Provider Perception Framework is interested in the general characteristics "stereotyped" to the specified occupation, the use of out-group participants is deemed appropriate. The possibility exists and is likely that the service provider will share in-group characteristics with the customer, though not through occupation, and will therefore be accounted for appropriately. For example, a stereotype for a teacher may exist that includes physical characteristics such as blonde hair, physically fit, and a smiling face. An individual encountering this stereotypical teacher may also have blonde hair and be physically fit, but does not possess any other characteristics of the stereotypical teacher. Because both individuals share the blonde hair and physically fit characteristic, they would be considered in-group members if the delineation was based on one or both of these characteristics.

The Service Provider Perception Framework (SPPF) is an adaptation of the Stereotype Content Model designed to fit service provider perception as opposed to a

range of social groups. In this transition the original personality trait dimension of "warmth" will become "affect," and "competence" will remain the same. Research has found that regardless of their names, the two identified dimensions are similar (Abele and Wojciszke 2007). The affect dimension represents a culmination of emotional dimensions. Friendliness of the service provider is important in the service encounter because a large portion of services centers on the interpersonal interaction of the service provider and the customer (Crosby and Stephens 1987; Iacobucci and Ostrom 1993; Surprenant and Solomon 1987). The competence dimension evaluates the level of professionalism in the service provider's occupation. In a general sense, most service provider types should be competent or have a high ability in their respective occupation. However, when using a competence continuum, occupations can classified as professional or unprofessional, wherein a professional occupation would be characterized as having a higher level of competence than a nonprofessional occupation. A janitor, for example, is probably considered competent to do janitorial work, but is probably less competent and does not have the ability to perform the same work as a trained physician or attorney.

Figure 2.10 depicts the initial proposal of the SPPF which is expressed in a similar 2 x 2 matrix as the Stereotype Content Model shown in Figure 2.8. The competence dimension addresses the issue: "What are the characteristics of the service provider's profession" and the affect dimension addresses the issue: "What are the characteristics of the service provider's demeanor."

		Competence	
		Low	High
Affect	High	IV	I
	Low	III	II

Figure 2.10 *Service Provider Perception Framework (SPPF)*

In the competence dimension, service providers can be classified according to their level of professionalism, as designated by their occupational category. The distinction between a professional service provider and a non-professional service provider lies in the characteristics associated to the service provider's occupational category and not in the actual service being performed.

In the affect dimension the pleasing nature of the service provider is proposed to change based on the characteristics involved in performing the service. Additionally, the perception from the consumer regarding the service provider varies on the type of characteristics in the service.

Using the health care industry to illustrate this point, an individual needing to visit a doctor may classify this service scenario as "professional," meaning the individual expects the visit to be with a board certified and highly trained physician, but the individual will also encounter other providers within the context who may or may not be

considered "professional." A script for visiting a general practitioner doctor includes contact with several different service providers. The patient may encounter a receptionist when first entering the building, a nurse who calls the patient from the waiting room to check vitals, a different nurse in the examination room, a lab technician who may draw blood or perform other tests on the patient, a doctor to assess and diagnose the illness, and finally a billing representative at the end of the visit. Each of these individuals is a provider to the patient in the health care setting, but each one does not have the same credentials, training, and knowledge of health care, nor does each individual have the same empathetic demeanor and, thus, is not evaluated equally.

In the same setting where an individual needs to visit a doctor, the nature of the service varies depending on which type of service provider the individual comes in contact with. The service characteristics associated with the nurse who calls the patient back from the waiting room to check vitals, the nurse in the examination room, and the lab technician who draws blood, can all be classified as experience-based services. The patient has to experience the nurse or lab technician in each situation to be able to evaluate the attributes associated to the "purchase." The characteristics associated with the doctor who diagnoses the illness can be classified as a credence-based service. Even after the "purchase" and "consumption" associated with the doctor, it is difficult for the consumer to evaluate the attributes associated with the service. Although the consumer recovers from the illness, it is difficult to measure the appropriateness of the diagnosis when there is potential for several reasons as to why the patient recovered. At the end of this service encounter, the patient will meet the billing representative, which can be considered a search-based service. Here the patient already has the information for the

fees and co-payments for the visit. The patient can search for these attributes before entering into the service encounter.

Quadrants I and III represent the diagonal dimensions, indicating high competence mixed with high affect (quadrant I) and low competence mixed with low affect (quadrant III). Quadrants II and IV represent the two off diagonal dimensions, indicating high competence mixed with low affect (quadrant II) and low competence mixed with high affect (quadrant IV). Individuals expecting services to be performed want to maximize both the competence and affect dimension, but they may have trouble overcoming the old cliché "it's too good to be true," thus categorizing the provider as being high on one dimension while low on the other. Though the highest level of competence combined with the highest level of affect is the ultimate anticipation in many service settings, consumers have a tendency to shy away from providers exceeding service on both dimensions, for fear they are being "duped" or that they are missing a key "catch" in the experience that will inhibit their level of overall satisfaction or overall quality.

Innuendo

The *innuendo effect* describes the tendency for individuals to draw negative inferences given positive descriptions that have omitted either the warmth or competence dimension of social perception (Abele & Wojciszke 2007; Fiske, Cuddy, and Glick 2007). When describing people, two competing norms exist regarding the communication of negative information about others. The first norm indicates that speakers are expected to follow maxims of quality and relation (Grice 1975) wherein they provide both truthful and relevant information. The competing norm speaks to

preserving social harmony and preserving the speaker's reputation. Research in trait transference indicates that communicators providing negative impressions often reflect badly on the speaker (Skowronski, Carlston, Mae, and Crawford 1998). Thus, the competing norms are "Tell the truth, the whole truth, and nothing but the truth," on one hand and "If you don't have anything nice to say, don't say anything at all," on the other. Kervyn, Bergsieker, and Fiske (2012) propose that the innuendo effect allows speakers to reconcile the two seemingly contradictory communication norms when it comes to conveying negative information about others. Using the innuendo effect, the authors propose that speakers can convey negative information on a contextually relevant dimension by markedly omitting information on that dimension.

Two fundamental dimensions activate theory on person perception (Abele 2003; Russell and Fiske 2008; Wojciszke 1994; Wojciszke, Bazinske, and Jaworski 1998). While these two dimensions often have different terms, they are defined here as used in Fiske, Cuddy, Glick, and Xu (2002) as warmth and competence. Using the person perception theory (Fiske, Cuddy, and Glick 2007; Wojciszke 2005), individuals must answer two fundamental questions about the perceptual dimensions when forming an impression about someone: "Are this person's intentions toward me good or bad?" (Inferred warmth) and "Can this person carry out these intentions?" (Inferred competence).

Rosenberg, Nelson, and Vivekananthan (1968) were the first researchers to provide evidence with respect to the two dimensions that organize how individuals perceive others in terms of personality traits. The authors found that 64 personality traits, sorted by participants on whether or not they occurred in a given person, were organized

on a two-dimensional space. The dimensional labels were *social good-bad* and *intellectual good-bad*. Prior to this research, Asch (1946) first argued that warm/cold were traits central to forming very different impressions when describing someone as *intelligent, skillful, industrious, warm or cold, determined, practical, and cautious*. Using both sets of research, Zanna and Hamilton (1972) argued the only traits central to the *social good-bad* dimension of Rosenberg et al.'s (1968) research were the *warm/cold* traits from Asch (1946).

Wojciszke (1994) interpreted Rosenberg et al.'s (1968) two-dimensional model as behavioral goals: the moral category and the competence category. Combining these two categories, four possible action classifications emerge: virtuous success, virtuous failure, sinful success, and sinful failure. Wojciszke, Abele, and Baryla (2009) extended this notion and showed that individuals in the virtuous success category are liked and respected, those individuals in the sinful success category are disliked and respected, those individuals in the virtuous failure category are liked and disrespected, and those individuals in the sinful failure category are disliked and disrespected.

In their first study (Study 1), Kervyn, Bergsieker, and Fiske (2012) test for an innuendo effect using only one dimension (i.e., competence or warmth) and assessing whether participants draw negative inferences given a positive-person description. The context was either social in nature (a travel group) or work related (an academic group). The authors predicted the strongest innuendo effect for a warmth description in an academic context (high competence) and a competence description in a social context (high warmth) and predicted a weak or absent effect when the description matched the context (i.e., warmth description in a social context [high warmth]). Additionally, the

authors hypothesize a moderated relationship between the target evaluations on the praised dimension and group inclusion, eliciting positive results on the control condition and nonexistent or negative in the innuendo condition. The results show a strong innuendo effect on all three dependent variables and were stronger than expected in the absolute warmth, absolute competence, and relative likeability ratings of both contexts. Targets described in generally positive terms came across as less warm and likeable when using high competence and less competent when using high warmth. Mediation supported the innuendo hypothesis that target derogation of the omitted dimension leads to a more negative decision on group inclusion.

Study 2a further evaluates the innuendo effect while testing for moderation by target gender, and Study 2b has participants read and draw inferences provided by Study 2a participants, testing whether or not listeners pick up on communicators' innuendo and if this is moderated by target gender. Findings for Study 2a again indicate a strong innuendo effect. A positive description on a less salient dimension leads to a negative perception of the salient dimension, compared to a general description. The target was viewed as less warm and likeable when praised for high competence in the social context and as less competent and capable in the work context when praised for high warmth. Similar to the first study, negative evaluations of the target on the omitted dimension mediated the innuendo effect on inclusion in the group. The prediction for a stronger innuendo effect for female targets was not supported. As predicted in Study 2b, the innuendo effect did emerge from the open-ended descriptions of the Study 2a participants prior to their completing the study. Strong support is shown as a means of

communication and perpetuating mixed impressions, and the innuendo effect may be stronger for female targets than for male targets.

Behavioral Intentions

Using an experiment in the banking industry, Shao et al. (2004) manipulate type of dress (appropriate vs. inappropriate) with involvement (high vs. low) and customer gender (female vs. male), finding that appropriately dressed service providers lead to higher customer expectations of the firm and stronger purchase intentions to the organization than inappropriately dressed service providers. The authors find that customers respond differently to service provider employee dress depending on the situation and the individual perceiver, supporting social perceptions theory in a marketing context. The expectations of service quality and purchase intent based on service provider dress were found to be stronger in the low involvement situation than in the high involvement situation. Additionally, the extent of appropriate dress on expectations of service quality and purchase intent was stronger for women than for men (Shao, Baker, & Wagner, 2004). These findings support the notion that dress cues serve as a basis for which customers make inferences and patronage decisions of the firm, but are mixed in the nature of situation involvement and gender of the customer.

From previous research, we have seen counterstereotypical service providers rated higher in quality and satisfaction when service delivered was excellent as compared to a stereotypical service provider also delivering excellent service. Thus, we can predict that individuals will be more likely to repeat patronage to those counterstereotypical providers who performed above the stereotypical provider. However, the stereotypical service provider will be selected for repeat purchase over the counterstereotypical service

provider when the counterstereotypical service provider was equally as good as the stereotypical service provider.

Hansen et al. (2003) find a positive carryover effect of affective commitment from an employee to the firm. Affective commitment to the firm then has a strong positive effect on loyalty, and the effect of the customer's commitment on loyalty to the employee is seen through a commitment to the firm.

Social perception theory indicates individuals use cues to make inferences about others (Baron and Byrne 1981). Perception is the function of multiple sources of information from the environment and from an individual's predisposition, expectations, motives, and knowledge obtained from prior learning experiences (Schiffman 2001). In a servicescape, individuals often receive a variety of stimuli, cognitively organize them into groups, and form images from the stimuli as a whole (Lin 2004).

Introduction to Conceptual Development of
Dissertation Research

The following section will draw from the literature review and relevant theory to produce a working conceptual model, shown in Figure 2.11. The conceptual model presents a sequence of the antecedents and outcomes in the evaluation of a service provider's performance. Current expectations are the expectations that a consumer has when he or she encounters a service provider. This expectation coupled with prior expectations produces a level of disconfirmation that precipitates subsequent cognitive and affective results.
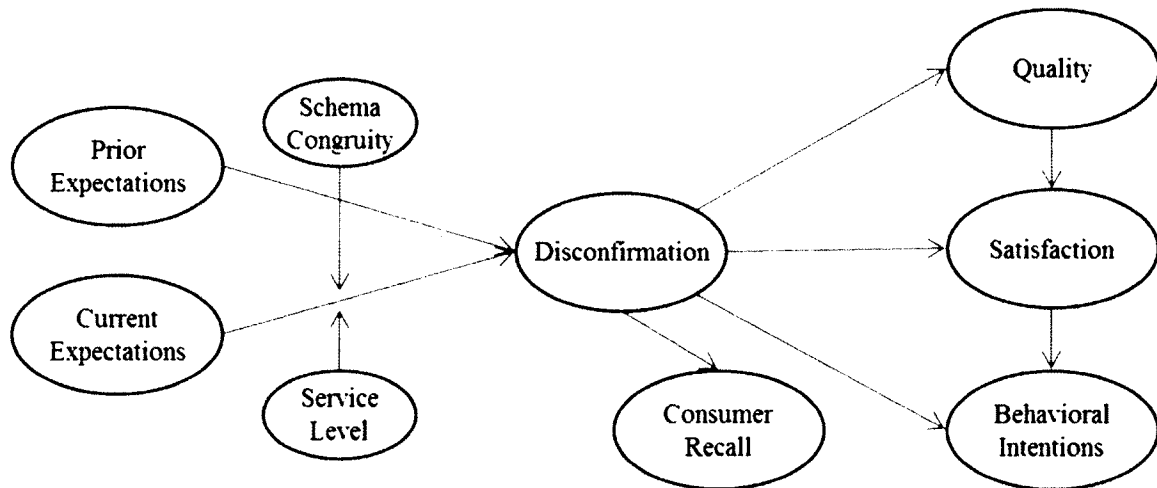
Figure 2.11 *Proposed Model*

This model is similar to the one Bitner (1990) used to study service encounter evaluations through the disconfirmation model. Bitner's (1990) study uses a service failure at a travel agency to conclude differing levels of dis/satisfaction based on the cause of the failure in the situation. A onetime failure occurrence perceived as being caused by something outside the firms' control resulted in less dissatisfaction than when the failure is perceived as likely to reoccur and within the firms' control. Additionally, controllable variables including employee explanations, compensation offers, and the physical environment appearance can influence customers' perceptions for the cause of a service failure.

The model put forth by Bitner (1990) uses the traditional disconfirmation process to evaluate the satisfaction level with events that occur in the entire service encounter. While the physical environment surrounding the service provider was manipulated to display either an organized or messy environment, characteristics regarding the actual service provider were not evaluated as to the influence of the outcome of the encounter. In the service encounter, especially with respect to intangible services, a consumer may

have only the provider and the physical environment to evaluate the level of satisfaction and quality associated with the service.

With respect to the service provider perception, the source of disconfirmation may occur even before any service has taken place. Because it is often difficult to separate the service from the service provider, individuals may begin processing potential attributes of the service upon initial perception of the service provider. Thus, it is necessary to determine how differences in provider expectations and perceived service performance differ with respect to the visual stereotype associated to the provider as well as a written description of the provider describing incomplete information (innuendo). As used in the conceptual model, prior consumer expectations are defined as attributes associated to stereotypical service providers. This includes characteristics such as visual appearance, ethnicity, gender, age, credentials needed to perform the service, etc. Current expectations are operationalized from a combination of stereotype consistency (yes/no) and the innuendo effect (complete information/incomplete information). More detail of these terms are discussed in the research questions that follow.

Research Questions and Conceptual Development

➢ Research Question 1: Can the Service Provider Perception Framework (SPPF) effectively categorize service providers based on the dimensions of competence and affect? Are categories of the SPPF created based on differences in competence and affect predictive of service outcomes in some way?

➢ Research Question 2: What is the movement within and between quadrants of the SPPF for service providers when subjects are provided incomplete information on only one SPPF dimension?

➢ Research Question 3: How does the potential activation of a psychological innuendo effect affect consumers' perceptions of service providers?

➢ Research Question 4 (a): How does the perception of a service providers performance change from the initial expectation when affected by one or a combination of:

- Innuendo?

- Stereotype influence?

- Service outcome?

➢ Research Questions 4 (b): What are the cognitive and affective effects (i.e., consumer recall, perceived quality, satisfaction, and behavioral intentions) when service providers are affected by one or a combination of:

- Innuendo?

- Stereotype influence?

- Service outcome?

Hypothesis Development

Research Question 1

The first research question addresses two main questions regarding the Service Provider Perception Framework: (1) Can the Service Provider Perception Framework (SPPF) effectively categorize service providers based on the dimensions of competence and affect? (2) Are categories of the SPPF created based on differences in competence and affect predictive of service outcomes in some way? I develop a categorization scheme that is potentially useful in explaining consumer reactions to service providers. The SPPF divides different service provider stereotypes into categories based on variance

in perceived competence and affect. A series of "pretests" are conducted to assess service provider placement within the framework. Once complete, the effectiveness of the categorization criteria is assessed. Following the pretesting, specific service providers are selected for analysis of the remaining research questions.

Research Question 2

The second research question is concerned with the movement within and between quadrants of the SPPF when subjects are provided incomplete information on only one dimension of the SPPF. Movement is the term used to describe a change in the placement of the service provider in the SPPF from the complete condition to one of the four incomplete conditions. While a change in placement occurs on both the competence and affect dimension, the movement in Research Question 2 is assessed on only the provided dimension. A schema serves as a knowledge base for consumers to interpret information, actions, and expectations (Graesser, Woll, Kowalski, and Smith 1980; Rumelhart and Ortony 1977). The schema guides perception, action, and thought concerning attributes about the most usual instances (Rumelhart and Ortony 1977). However, not all service providers a consumer encounters will possess characteristics consistent with "the most usual instances."

According to Mandler (1982), the valence and extremity of affective responses can be influenced by responding to different levels of schema congruity. Congruity with the associated schema leads to favorable outcomes because individuals like the confirmation between the object and associated expectations following a pattern of predictability. Incongruity with the associated schema occurs at two levels: moderate incongruity and severe incongruity. Moderate incongruity can be resolved successfully,

creates arousal and greater cognitive elaboration than schema congruity, and is viewed as "interesting and positively valued" (Mandler 1982, p. 22). Extreme incongruity also generates cognitive elaboration, but often leads to a negative outcome because the consumer becomes frustrated rather than reaching a resolution. Thus,

H_1: A subject exposed to stereotypically consistent information on only one dimension of the SPPF will result in a significant shift in the direction of the consistency on the provided dimension.

H_2: A subject exposed to stereotypically inconsistent information on only one dimension of the SPPF will result in a significant shift in the direction of the inconsistency on the provided dimension.

Research Question 3

The third research question addresses the applicability of the innuendo effect on consumers' perceptions of service providers. Research conducted in social psychology finds strong support for the innuendo effect. Listeners hearing positive information on a contextually nonsalient dimension draw negative inferences on the omitted salient dimension, leading perceivers to derogate targets on the omitted dimension based on the description (Kervyn, Bergsieker, and Fiske 2012). In their first study participants evaluated a gender neutral target in the context of a social situation (a travel group) and a work related context (an academic group). Findings indicate a strong innuendo effect on all three dependent variables (absolute warmth/competence, relative likeability/capability, inclusion suitability), and stronger than hypothesized in the absolute warmth, absolute competence, and relative likeability ratings of both contexts. Initially, the authors predicted little or no innuendo effect to occur when positive

information was provided on the more contextually salient dimension. However, in this situation, the innuendo effect did occur on the omitted dimension. Thus:

H_3: A subject exposed to stereotypically consistent incomplete information on the competence dimension only will rate a high affect service provider (quadrant I or quadrant IIV) lower in affect relative to the complete condition.

H_4: A subject exposed to stereotypically consistent incomplete information on the competence dimension only will rate a low affect service provider (quadrant II or quadrant III) higher in affect relative to the complete condition.

H_5: A subject exposed to stereotypically consistent incomplete information on the affect dimension only will rate a high competence service provider (quadrant I or quadrant II) lower in competence relative to the complete condition.

H_6: A subject exposed to stereotypically consistent incomplete information on the affect dimension only will rate a low competence service provider (quadrant III or quadrant IV) higher in competence relative to the complete condition.

Research Question 4 (a)

The first part of the fourth research question addresses the extent of the expected disconfirmation when service providers are affected by the innuendo, stereotype influence, and varying service outcomes. Figure 2.12 provides the proposed conceptual model. Prior expectations are the expectations an individual holds about the service provider. Prior expectations are not manipulated in this study, but merely assessed to understand how consumers perceive the "stereotypical" service provider, and their knowledge level associated to the service provider and the service category. Current

expectations are manipulated to include stereotype consistent or inconsistent traits, and the presence or absence of the innuendo effect.
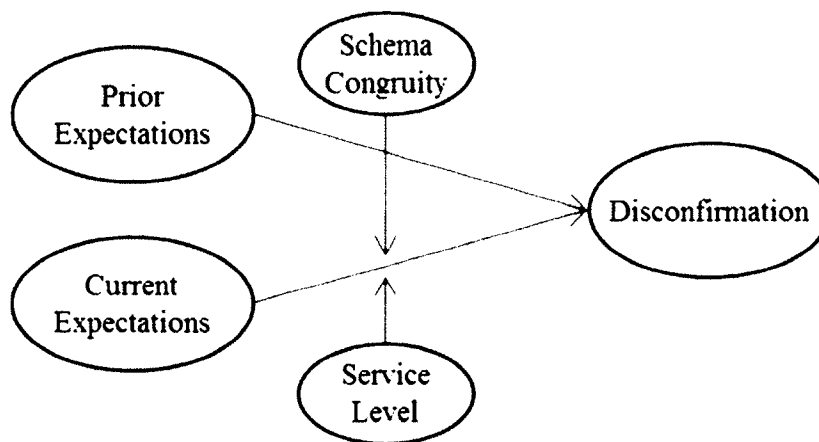
Figure 2.12 *First Half Model*

Table 2.2 provides an overview of the stereotype and innuendo manipulations. Stereotype consistent is assessed by what the consumer thinks of when a service provider is named. Stereotype inconsistent is displayed as traits that do not specifically belong to the specific service provider mentioned. Incomplete information is defined as being given information on either the competence dimension or affect dimension, but not both. Complete information is defined as being given information on both the competence and affect dimension. However, complete information does not mean that the consumer has complete and all-encompassing information on the specific service provider.

Table 2.2

Current Provider Expectation Manipulation

		Stereotype Manipulation	
		No	Yes
Innuendo Manipulation	Yes	Stereotype Consistent / Incomplete Information	Counterstereotype Influence / Incomplete Information
	No	Stereotype Consistent / Complete Information	Counterstereotype Influence / Complete Information

According to the literature on expectancy-violation theory (Jussim, Coleman and Lerch 1987; Jackson, Sullivan, and Hodge 1993), individuals in violation of expectations for the selected group membership will be evaluated more extremely (in the direction of the violation) than individuals not in violation of the group membership's expectations. Research by Jackson, Sullivan, and Hodge (1993) supports expectancy-violation theory in a study manipulating stereotype consistency of white or black applicants with respect to strong or weak college application credentials. Looking at the out-group results, black applicants with strong college application credentials (stereotype inconsistent) were evaluated more positively than white applicants with strong college application credentials (stereotype consistent).

Service providers who match the associated stereotype and/or do not suffer from the innuendo effect will be deemed to meet the expectations and not incur any violation. Service providers who are in violation of the stereotype, but in a positive (negative) way, will be evaluated as more extremely in a positive (negative) manner than those service providers who fit the stereotype. Service providers who are subjected to the innuendo

effect will be evaluated more negatively than those service providers who do not suffer from the innuendo effect. Prior research and empirical evidence is not strong enough to propose the direction of the violation when service providers are subjected to both counterstereotypical influence (either positive or negative) and the innuendo effect (negative).

Research by Matta and Folkes (2005) assesses the level of provider performance in conjunction with stereotype influence. Findings indicate that a counterstereotypical service provider is viewed more competently than a stereotypical service provider when excellent service is delivered, but a similar level of inferior competence is rendered when mediocre service is delivered from both the counterstereotypical and stereotypical service provider.

In the products literature, Myers-Levy and Tybout (1989) find consistent results with Mandler (1982) when evaluating mismatch outcomes between new product attributes and schema-level representations. This research on service providers is similar to that in the product literature given that a counterstereotypical service provider and/or one that is subjected to the innuendo effect is mismatched to current category attributes.

H$_7$: A subject exposed to a stereotypically inconsistent service provider delivering excellent performance will have higher positive attitudes toward the service provider than a subject exposed to a stereotypically consistent service provider also delivering excellent service.

H$_8$: A subject exposed to a stereotypically inconsistent service provider and the innuendo will result in the strongest negative disconfirmation (a subject exposed

to a stereotypically consistent service provider and the innuendo will result in the strongest positive disconfirmation).

Research Question 4 (b)

The second part of the fourth question addresses the right side of the conceptually proposed model (Figure 2.13). Using the levels of disconfirmation found in the first section of this question as the independent variable, the focus is now on the outcome variables of the service being performed: consumer recall, quality, satisfaction, and behavioral intentions. Consumer recall is the ability of the individual to recall traits listed that described the specific service provider.
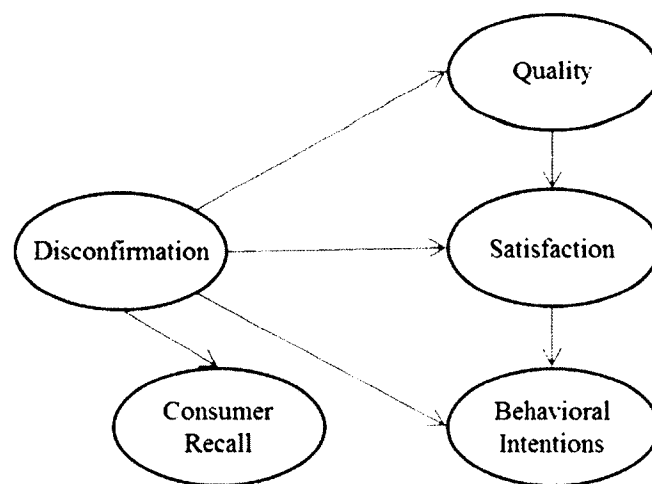
Figure 2.13 *Second Half Model*

Following expectancy-disconfirmation theory (Weaver and Brickman 1974; Ilgen 1971), purchases (in this case the service being performed) and product usage regarding actual performance levels are compared to the individuals' expectation level determined before the purchase (service) was made. The disconfirmation is then linked to satisfaction judgments where the higher (lower) an individual's expectation, the higher

(lower) the subsequent satisfaction judgment will be. The emotional experience either enhances satisfaction (positive disconfirmation) or decreases satisfaction (negative disconfirmation). Transferring to the services literature, a service provider's actual performance as compared to the expected level determined by the consumer before the encounter takes place will influence the consumers overall level of satisfaction with the service provider.

To evaluate the level of perceived provider quality, the model proposed by Gronroos (1984, 1990) is utilized. Consumers can evaluate both technical and functional quality relating to the service. The consumer is able to identify the technical qualities (output) of the service at the completion of the encounter; however, it is more difficult to evaluate the associated functional quality. Because functional quality is linked with psychological and behavioral aspects, and the consumer holds an image of the firm (and/or provider), it is proposed that the evaluation of overall quality is the combination of technical quality and the held stereotype expectation of the firm (service provider).

H_9: A subject reporting negative disconfirmation will report lower satisfaction than a subject with a positive or neutral disconfirmation (a subject with positive or neutral disconfirmation will report higher satisfaction than a subject with a negative disconfirmation).

H_{10}: Perceived quality is expected to mediate the relationship between disconfirmation and satisfaction.

H_{11}: Positive disconfirmation will result in positive behavioral intentions when the positive disconfirmation results from schema congruity (negative disconfirmation

will result in negative behavioral intentions when the negative disconfirmation results from extreme incongruity).

H_{12}: Negative disconfirmation will result in a greater number of descriptive traits being recalled than will a positive disconfirmation.

CHAPTER 3

RESEARCH METHODOLOGY

The research methodology section presents tools appropriate for developing and testing the Service Provider Perception Framework (SPPF), the proposed theoretical model, and the associated hypotheses. The research methodology section can be described in two parts. The first part of the methodology section refers to the research, ultimately demonstrating the placement of typical service providers within the SPPF and the selection of service providers for use in the innuendo study and the main study. A description of the methodology for testing the framework explains the need and the process for each pretest. The pretest results section gives a brief overview of the approaches taken to place service providers within the framework and the methods for selecting service providers for use in the innuendo study and the main study.

The second part of the methodology section refers to the development of the innuendo study and the main study that are employed to test the proposed hypotheses. The innuendo study examines the innuendo effect in a marketing context, explaining how individuals perceive service providers given incomplete information. This study is necessary to see if the innuendo effect can be successfully transferred into marketing before testing the theoretical model. The main study examines the full conceptual model and tests the associated hypotheses presented in the second chapter. The experiment is

designed with power consideration and experimental manipulations in mind to allow for maximum control and high internal validity.

Service Provider Perception Framework

The primary purpose of the pretests is to develop the Service Provider Perception Framework classification scheme and to select service provider stereotypes to be used in the subsequent innuendo effect experiment and for an experiment testing the proposed theoretical model (see Chapter 2). In total, three pretests are conducted, each one building on the findings of the previous pretest.

Pretest Methodology

Pretest One Methodology

The first pretest seeks to partially address Research Question 1a: "Can the SPPF effectively categorize service providers based on the dimensions of competence and affect?" The first pretest only partially addresses the first Research question in that its purpose is to generate a list of salient service providers for categorization. Before service providers can be categorized on competence and affect, it is necessary to determine such a list of providers that multiple respondents think of and that other individuals are familiar with. Thus, the purpose of the first pretest is to create a starting point in the categorization of service provider types for evaluation in the SPPF by producing a list of individuals that are recognizable to respondents.

The questionnaire allows respondents to answer in an open-ended format. I seek first to elicit free association responses to identify service provider categories that are "top of mind" among respondents. As such, the first question asks respondents to list at

least five types of services providers. Below the question is a brief definition stating that a service provider is defined as "an individual that provides service to other entities for payment." Respondents could list up to eight services providers in this section. The second question asks respondents to list two traits that the respondent feels describes each service provider category listed in the first question. Below the question is a brief description stating that a trait is defined as "a distinguishing feature of the service provider."

The third question asks respondents to rate how well each of eight terms describes the first five service providers listed by respondents in the first question, using a sliding scale from 0 = "Not at all" to 100 = "Completely." The terms used in question three are as follows: pleasant, friendly, warm, dull, competent, intelligent, professional, and exciting. The fourth and fifth questions again ask respondents to provide types of service providers, this time with the aid of prompting, to capture additional service provider categories that might not have been "top of mind" in the first question. The fourth question asks respondents to list three types of service providers that they use and had not previously listed that could be described as low in competence. The fifth question asks respondents to list three types of service providers that they use and had not been previously listed that could be described as unfriendly. The final section of the first pretest collects demographic information. Data is collected using "Mechanical Turk" from Amazon.

Pretest Two Methodology

The second pretest seeks to partially address Research Question 1: "Can the SPPF effectively categorize service providers based on the dimensions of competence and

affect?" The first pretest only partially addresses this question by establishing a set of service providers to be used, while this second pretest categorizes the service providers on the dimensions of competence and affect. The second pretest captures additional information with which to determine the placement of each service provider in the SPPF. The 24 service providers identified at the end of the first pretest serve as the focus of this study. Data collection is executed using Mechanical Turk from Amazon.

Once again, the pretest study begins by eliciting responses designed to map out the cognitive associations people have in conjunction with service provider categories or "types." The first question in the second pretest asks respondents to think about the various types of people who perform the service occupations described across the top of a grid, where the service provider category is listed across the top and descriptive terms are listed down the side. Each respondent is asked to rate six of the 24 service providers. All service providers are presented in a random manner. Respondents are then asked to rate each of the six service providers on each of 14 descriptive terms on a scale ranging from 1 = "Clearly does not describe this type of person" to 5 = "Perfectly describes this type of person." Twelve of the 14 items were taken from the competence and warmth constructs of the second study of Fiske, Cuddy, Glick, and Xu (2002). All terms are presented to respondents in a randomly determined order. Those items are listed in Table 3.1.

Table 3.1

Terms to Create SPPF Dimensions

Capable	Efficient	Intelligent	Trustworthy
Confident	Friendly	Sincere	Warm
Competent	Good-Natured	Skillful	Well-Intentioned

In addition to the terms used by Fiske, Cuddy, Glick, and Xu (2002), two additional terms were measured: professional and attractive. The term "professional" is added to capture the continuum of service provider occupations. The term "attractive" is added to capture whether or not consumers judge how a service provider looks as part of their overall affect.

The second question asks respondents to rate each of the same six service providers as the screen before on each of fifteen emotion items. The format for this question is the same as in question one, where the types of service providers are presented across the top of a grid and the descriptive terms are listed down the side. The fifteen emotion terms are listed in Table 3.2.

Table 3.2

Emotion Items Evaluated in Pretest 2

Annoyed	Attentive	Excited	Helpless	Relaxed
Aroused	Bored	Guilty	In Control	Satisfied
Ashamed	Disgusted	Happy	Manipulated	Upset

Once again, all terms are presented in a random manner. The final question in the second pretest asks respondents to rate the six service providers they previously rated on a five-item knowledge scale from 1 = "Strongly disagree" to 5 = "Strongly agree."

Pretest Three Methodology

The third pretest once again partially addresses Research Question 1 by confirming the findings of the second pretest using just one question for each dimension of competence and affect. Additionally, this pretest partially addresses Research Question 1 by developing a list of traits associated to select service providers in which

the innuendo study and the main study will manipulate the typical service provider and test whether different categories of the SPPF influence service outcomes in some way. Thus, the third pretest is conducted for two main purposes. The first purpose is to confirm that each service provider is accurately classified from the second pretest and the second purpose is to gather more information on each service provider to begin assessment of potential use in the innuendo study and the main study involving associated stereotypes and the innuendo effect. Data collection is obtained using Mechanical Turk from Amazon.

To accomplish the first purpose of the pretest, each respondent is asked to answer two questions. The first question asks the respondent to rate his/her view of the overall knowledge level of the typical service provider in each of the service provider categories listed using a sliding scale where 1 = "Very low competence" and 100 = "Very high competence." Competence is defined as the service provider's overall general knowledge and the specific skill-level knowledge associated to the service position. This question mimics the items used to create the competence dimension used in the second pretest, but is more concise in nature. This question uses a sliding scale where 1 = "Very low competence" and 100 = "Very high competence." Each respondent answers the above question for each of ten randomly selected service providers, from the 20 possible service providers used in the pretest. The second question asks respondents to rate how pleasant they feel being around a typical service provider in each of the service provider categories listed. Though this question is not as detailed as the affect question in the second pretest, it captures the positive or negative feelings elicited from the service provider and how much the respondent prefers to be around this type of person. This

question uses a sliding scale where 1 = "Unpleasant feelings" and 100 = "Very pleasant feelings." Each respondent answers the above question for each of the same ten randomly selected service providers that are presented in the first question.

The second purpose of pretest three is to gather additional information on each service provider to be used in the innuendo study and the main study regarding cognitive stereotype characteristics and the innuendo effect. To address this purpose, three questions are asked per respondent. The first question asks respondents to list the first five things that come to mind about the specific service provider. This question is open-ended, allowing the respondent to answer using one word or to provide a short description. The second question asks respondents to list five physical characteristics they notice when encountering the specific service provider. Again, this question is open-ended and is intended to illicit free association responses by allowing the respondent to answer using one word or provide a short description. The third question asks respondents to list three emotions they feel when encountering the specific service providers. This question is also open-ended allowing the respondent to answer using one word or provide a short description. Each respondent evaluates one service provider in this section, and the respondent provides responses for the same service provider for all three questions.

Pretest Results

Pretest One Results

Using Mechanical Turk by Amazon, a total of 25 useable respondents were obtained. In exchange for their participation, respondents received a small monetary compensation.

The first question asking respondents to list at least five types of service providers resulted in a total of 135 recorded answers. Because the question asked respondents to list an individual who performs the service, 56 responses that did not state a specific type of person were removed, leaving a total of 79 responses. Accounting for duplicates in the 79 service providers, a total of 46 unique service providers resulted. Fifteen service providers were listed by two or more respondents, and nine service providers were listed by three or more respondents.

At this time, the second question asking respondents to list two traits associated with each of the listed service providers is not analyzed. The third question asking respondents to rate each of the first five service providers listed is analyzed for each of the nine service providers listed by three or more respondents. Responses are analyzed for the following nine service providers: accountant, attorney, chef, doctor, electrician, gardener, hair dresser, house cleaner, and nurse.

Using SPSS Statistics version 21, factor analysis is conducted on the eight terms used in question three. The effective sample size (25 x 8) elicits a total of 200 response answers in which the within person effect is ignored. Principal component analysis is used to determine factor scores with Eigenvalues greater than one with Varimax rotation.

Rotations converged in four iterations producing three factors with an Eigenvalue greater than one (Table 3.3).

Table 3.3

Pretest One Principal Component Analysis

	Competence	Affect
Intelligent	.94	
Professional	.96	
Friendly		.96
Pleasant		.92
Warm		.91
Reliability	α = .913	α = .936

The first factor is labeled "Competence" due to the high loadings of the following trait items: intelligent and professional. While "competent" did not load into this dimension, the overall dimension is still termed "Competence" based on the theoretical discussion provided in Chapter 2. The second factor is labeled "Affect" due to the high loadings of the following trait items: pleasant, friendly, and warm. The third factor will not be used because several items have low loadings, the construct is not well defined, and the theoretical basis dictates only two factors.

The term "competent" does not load on the competence dimension in this first pretest. There are several ideas as to why this occurred. First, it is possible that respondents did not clearly understand the direction section and the questions answered come from two different perspectives. The first perspective is from the respondent, meaning the respondent answered the questions with respect to how they viewed the service provider. A second perspective is from the service provider, meaning the respondent answered the questions with respect to how they thought a service provider

viewed themselves. An additional reason as to why "competent" did not load on the competence dimension is that the individual term "competent" speaks only to the service providers' ability to perform the specific job. The terms 'intelligent' and 'professional' indicate a level of competence for the service provider that is not specific only to completing the service. Further pretests examine these sets of terms and seek to provide clarification by the use of more detailed instructions.

Figure 3.1 provides a graphical representation of the proposed differentiation of service providers between quadrants based on the responses. The high competence/high affect quadrant is comprised of the doctor and nurse. The high competence/low affect quadrant is comprised of the attorney. The low competence/high affect quadrant is comprised of the chef, hair stylist, house cleaner, and gardener. The low competence/low affect quadrant is comprised of the accountant and electrician.
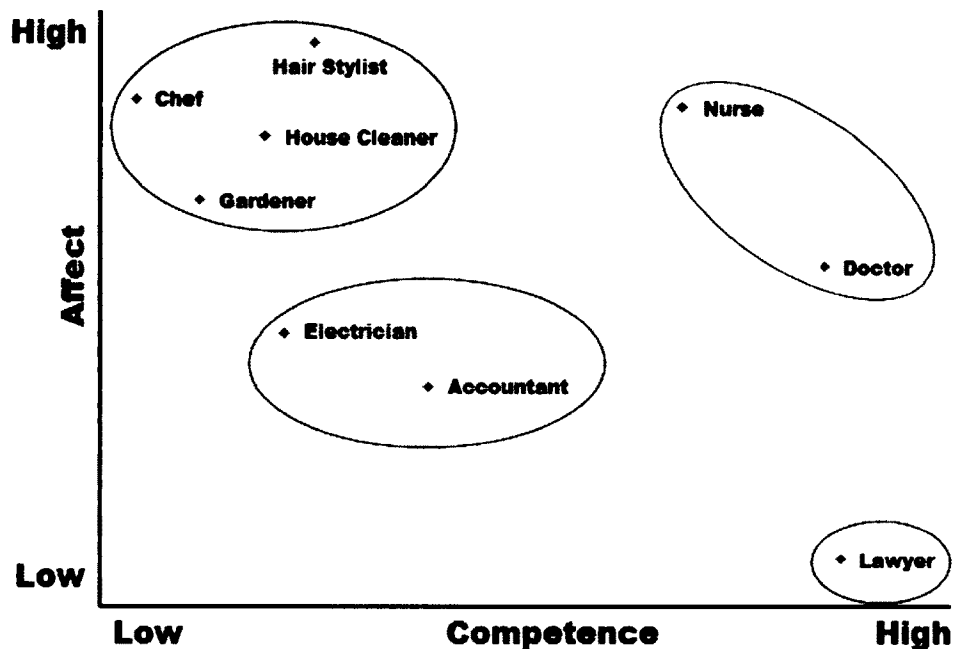
Figure 3.1 *Pretest 1 Proposed Service Provider Differentiation*

The analysis conducted thus far on pretest one demonstrates that the proposed SPPF is supported in that service providers can be classified on the two dimensions of competence and affect. Additionally, the SPPF shows that variation in the "type" of service provider occurs between groups, which are further discussed later in the pretests. Due to the small sample size of respondents, the low number of service providers used in analysis, and having only eight terms the respondents reported on, additional testing is needed in anticipation of replicating these findings.

The fourth and fifth questions offered additional service providers for use in further testing and analysis. A total of 54 responses were recorded on the fourth question asking participants to list three service providers that they use that had not previously been listed that are generally low in overall competence. After removal of responses that did not indicate an individual service provider, 36 responses remained. A total of 48 responses were recorded on the fifth question asking participants to list three service providers that they use that had not previously been listed that are unfriendly. After removal of responses that did not indicate an individual service provider, 37 responses remained. The 79 responses from question one, 36 responses from questions four, and 37 responses from question five are now combined to determine which service providers will be used in the second pretest. A total of 24 service providers were listed two or more times in the first pretest, and thus will comprise the service providers used in the second pretest. Table 3.4 lists the service providers to be used in the second pretest.

Table 3.4

Service Providers for Pretest 2

Accountant	Electrician	House Cleaner	Pizza Deliverer
Car Mechanic	Exterminator	Janitor	Plumber
Chef	Flight Attendant	Lawyer	Pool Cleaner
Doctor	Garbage Collector	Nail Tech	Sales Clerk
Dog Walker	Gardner	Nurse	Teacher
Dry Cleaner	Hair Stylist	Painter	Window Washer

Pretest Two Results

Using Mechanical Turk by Amazon, a total of 52 useable respondents were obtained. In exchange for their participation, respondents received a small monetary compensation.

Each participant responded to six service provider situations, resulting in a total of eleven to fifteen respondents per service provider. The order of the service providers was completely randomized between participants. Due to participants' beginning the questionnaire but exiting before submitting their answers, there is unequal distribution in the number of respondents per service provider. Only completed questionnaires were used for analysis.

On the first question, respondents rated all fourteen items for each of the six service providers on a five-point scale from 1 = "Clearly does not describe this type of person" to 5 = "Perfectly describes this type of person." Fourteen trait items are factor analyzed using principal component analysis with Varimax rotation. The effective sample size (301 x 14) yields a total of 4,214 response answers in which the within person effect is ignored. Rotation converged in three iterations, producing two factors with an Eigenvalue greater than one (Table 3.5).

Table 3.5

Pretest Two Principal Component Analysis

	Competence	Affect
Capable	.75	
Competent	.80	
Confident	.79	
Intelligent	.78	
Professional	.73	
Skillful	.78	
Friendly		.84
Good-Natured		.82
Pleasant		.85
Sincere		.70
Trustworthy		.67
Reliability	α = .89	α = .88

The first factor is labeled "Competence," due to the high loadings of the following trait items: capable, competent, confident, intelligent, professional, and skillful. The second factor is labeled "Affect," due to the high loadings of the following trait items: friendly, good-natured, pleasant, sincere, and trustworthy. Three items (efficient, well-intentioned, and attractive) did not load highly on either factor, and thus were removed from further analysis in the second pretest.

Average scores for each of the two factors (competence and affect) are produced for each of the 24 service providers. The average scores are then mean centered for each service provider. Mean centering is used to provide an easier method for evaluating the distance a specific service provider is on one dimension from the centroid of the entire dimension.

To examine the structure of the two-dimensional space, k-means cluster analysis is conducted to determine where each of the service providers fall within one of four theoretically predetermined clusters or quadrants. Following Fiske et al. (2002), four

clusters were selected because it was hypothesized that the groups will fit into one of the four quadrants along the two main dimension of the SCM: competence and warmth. While the dimension names and construct components have changed slightly from the Stereotype Content Model, the proposal is carried forward that the service providers will fall along the two main dimensions of this framework: competence and affect.

The first cluster is comprised of five service providers: Doctor, Accountant, Nurse, Teacher, and Flight Attendant. The second cluster is comprised of three service providers: Lawyer, Chef, and Electrician. The third cluster is comprised of six service providers: Car Mechanic, Exterminator, Plumber, Pool Cleaner, Garbage Collector, and Window Washer. The fourth cluster is comprised of ten service providers: Hair Stylist, Painter, Dry Cleaner, Dog Walker, Gardener, Pizza Delivery Guy, Sales Clerk, Nail Technician, and Janitor. Figure 3.2 displays all 24 service providers in the four-cluster solution based on levels of perceived competence and affect elicited from the service provider. Though each cluster is not separated completely into one of each of the four quadrants, it is shown that distinctions can be made about service providers within clusters and between clusters.

High

Dog Walker

Flight Attendant

Nurse

Doctor

HO-HA

Gardener

House Cleaner

Accountant

Hair Stlyist

LO-HA

Teacher

Pizza
Delivery Guy

Dry Cleaner

Chef

Painter

Electrician

Janitor

HO-LA

Sales Clerk

Lawyer

Pool
Cleaner

Nail Technician

Exterminator

Garbage Collector

Car Mechanic

LO-LA

Plumber

Low

Window Washer

Affect

Low   **Competence**   **High**
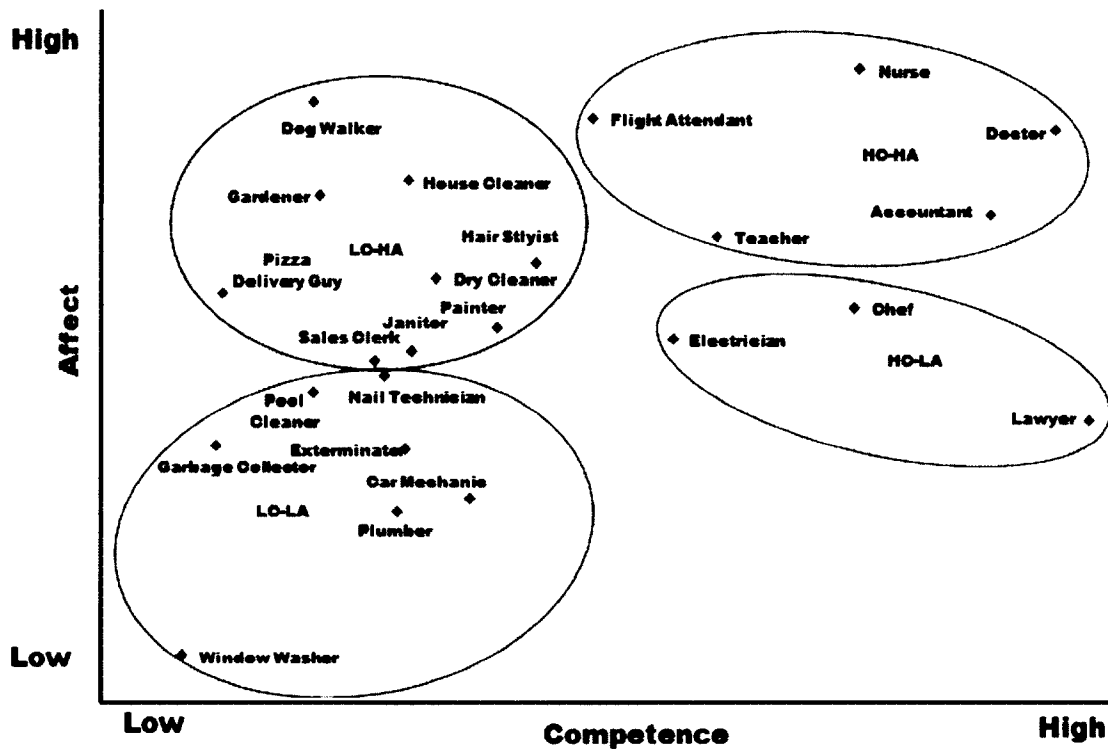
Figure 3.2 *Pretest 2 4 Cluster Solution*

After evaluation, a determination is made that four service providers are removed from further analysis. Three service providers -- window washer, garbage collector, and janitor -- are removed due to the nature of the service they perform. These service providers typically do not form long-term, interactive relationships with individuals, but instead work alone in providing the service. The window washer and the garbage collector infrequently come in contact with other individuals while performing their service. The janitor has more human interaction than the previous two providers; however, the service is most often performed for an organization rather than an individual person. The last service provider to be removed is the sales clerk. From the basic description, a clear distinction cannot be made as to how this individual interacts with others. A sales clerk can be interpreted in multiple ways: an individual who runs a cash

register, someone who maintains merchandise on a sales floor, or even a personal shopper. Going forward, 20 service providers are used in the third pretest.

Pretest Three Results

Using Mechanical Turk by Amazon, a total of 160 useable respondents were obtained. In exchange for their participation, respondents received a small monetary compensation. Each service provider has between sixty-seven and seventy-eight total responses after incomplete or inconsistent responses are removed.

To confirm that each service provider is consistent in the classification from pretest two, similar methodology is used. Since the third pretest asks a respondent to rate service providers on the whole construct of competence and affect using one question, it is not necessary to begin the analysis with factor analysis. To begin, an average score is calculated for each of the two dimensions: competence and affect for each of the 20 service providers. The scores are then mean centered based on the category average. Again, mean centering is used to provide an easier method for evaluating the distance a specific service provider is on one dimension from the centroid of the entire dimension.

To evaluate the structure of the two-dimensional space, k-means cluster analysis is again used, placing each service provider into one of four theoretically predetermined clusters. The first cluster comprised four service providers: Teacher, Nurse, Doctor, and Accountant. The second cluster comprised five service providers: Car Mechanic, Exterminator, Plumber, Electrician, and Lawyer. The third cluster comprised six service providers: Nail Technician, Dry Cleaner, Pool Cleaner, House Cleaner, Pizza Delivery Guy, and Dog Walker. The fourth cluster comprised five service providers: Chef, Gardener, Flight Attendant, Hair Stylist, and Painter.

After evaluation of each service provider, the decision is made to once again remove four service providers: Dog Walker, Dry Cleaner, Painter, and Electrician. The Dog Walker is removed due to inconsistencies between the second pretest and the third pretest. Additionally, upon further investigation of this provider, no formal stereotype is found amongst the respondents. The Dry Cleaner is removed from further analysis because respondents provided more attributes on the characteristics of the service of dry cleaning as opposed to the dry cleaner that runs the business. The painter is removed because a wide variation occurred in respondents in the type of painter being described. Participant answers varied between a house painter and a French (i.e., portrait/landscape/etc.) painter. A consistent stereotype for the painter category is not obtained from the respondents. Lastly, the Electrician is removed because of the lack of consistent characteristics that described this service provider. Participants described attributes of the service being performed, but not of the individual performing the service. After removal of the four service providers, a second k-means cluster analysis is completed on the remaining sixteen service providers as seen in Figure 3.3.
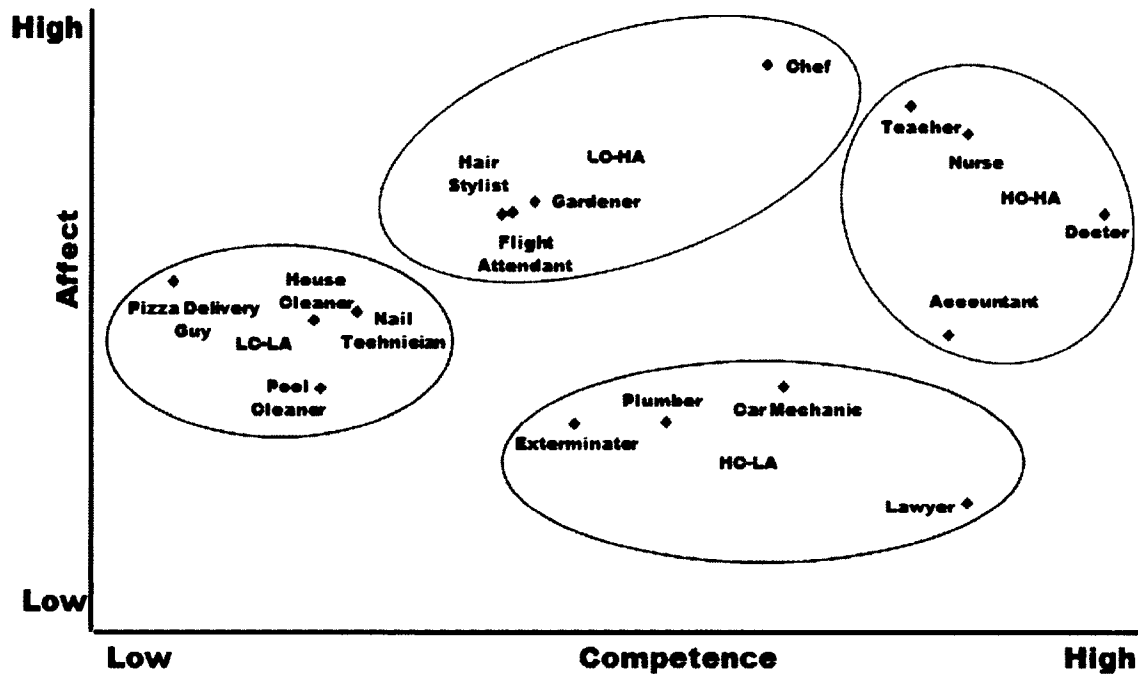
Figure 3.3 *Cluster Analysis Pretest 3*

The cluster analyses conducted in pretests two and three provides support for the dimension creation and placement of service providers in the SPPF. Pretest two uses multi-item constructs to place service providers, while pretest three uses a single item measure. The consistency within and between the clusters indicates that additional service providers can be classified and produce similar results.

The dissertation seeks to study service provider stereotypes as noted in Research Question 4. This research question evaluates the consumers' perception of service providers when they encounter a service provider that may or may not be the typical provider they are expecting. In this situation, the service encounter may be subject to a different outcome due to the difference in "type" of service provider encountered. As such, research is needed to map the cognitive schema that represents a common stereotype for select service provider categories. To help accomplish this second purpose of the third pretest, respondents answered three open-ended questions. The first question

asks respondents to list five things that come to mind about the specific service provider. This question seeks to evaluate what general characteristics are associated to the specific service provider. The second question asks respondents to list five physical characteristics they notice when encountering the specific service provider. This question seeks to evaluate how the "stereotypical" service provider looks. The last question asks respondents to list three emotions they feel when encountering the service provider. This question seeks to evaluate how consumers respond to the "stereotypical" service provider in an encounter.

In total, responses are recorded for each of sixteen service providers. However, for purposes of this research, only one service provider per cluster is evaluated in the innuendo study and the main study, as discussed below. Because this dissertation evaluates the differences between clusters (quadrants) as opposed to within clusters (quadrants), it is not necessary to evaluate all sixteen service providers. The service providers to be used are as follows: cluster one (high affect / high competence) – doctor, cluster two (low affect / high competence) – lawyer, cluster three (low affect / low competence) – nail technician, and cluster four (high affect / low competence) – hair stylist. Ten respondents are recorded for each of these four service providers.

After looking at each of the open-ended questions individually, it is determined that the questions should be evaluated together. Several respondents report physical characteristics and emotion items in the first question that asks respondents to list five things that come to mind when encountering this individual. Table 3.6 provides the 20 most commonly provided traits associated to a doctor. Table 3.7 provides the 20 most commonly provided traits associated to a lawyer. Table 3.8 provides the 20 most

commonly provided traits associated to a hair stylist. Table 3.9 provides the 20 most

commonly provided traits associated to a nail technician.

Table 3.6

Doctor Traits

Age	Fear	Height	Nurse
Anxious	Frustration	Helpful	Physically Fit
Dark Hair	Gender	Medical Equipment	Professional
Educated / Intelligent	Glasses	Medication	Surgery
Empathetic	Healthy	Neatly Groomed	Worried

Table 3.7

Lawyer Traits

Briefcase	Glasses	Office Supplies	Smart
Cheat	Greedy	Physically Fit	Suit
Costs	Knowledge of Law	Professional	Tall
Court	Money	Rich	Well Dressed
Fear	Nervous	Shoes	Well Groomed

Table 3.8

Hair Stylist Traits

Anxious	Equipment	Manicured Nails	Shampoo
Apron	Excited	Nervous	Skilled
Clean	Female	Nice Hair	Smell
Clothes	Hair	Pretty	Talkative
Color	Happy	Salon	Well Groomed

Table 3.9

Nail Technician Traits

Accent	Colorful / Pretty	Female	Nervous
Asian	Dark Hair	Friendly	Relaxed
Calm	Ease of Use	Happy	Short
Certified	Equipment	Manicure / Pedicure	Skilled
Clean	Excited	Nail Polish	Skinny

Over the course of three pretests, the SPPF has shown that distinctions emerge between the competence and affect dimensions on which service providers can effectively be classified. The clusters do not conform completely to the quadrant distinctions listed earlier in the chapter, but the clusters do show within-group consistency and between-group differences. Findings from the SPPF allow for stereotyped behaviors and innuendo information to be drawn from the data and used in the innuendo study and the main study.

Method Section for the Innuendo Study

The innuendo study examines the research questions one through three. Research Question 1 focuses on the categorization of service providers based on the dimensions of competence and affect. Research Question 2 focuses on movement within and between quadrants of the SPPF when subjects are provided incomplete information pertaining to the service provider, and includes hypotheses one and two. Hypothesis one states that a subject exposed to stereotypically consistent information on only one dimension of the SPPF will result in a significant shift on that dimension in the direction of the consistency. Hypothesis two states that a subject exposed to stereotypically inconsistent

information on only one dimension of the SPPF will result in a significant shift on that dimension in the direction of the inconsistency.

Research Question 3 focuses on the potential activation of a psychological innuendo effect and the effect it has on consumers' perceptions of service providers (hypotheses three through six). Hypothesis three states that a subject exposed to stereotypically consistent information on the competence dimension only will rate a high-affect service provider (located in quadrant I or quadrant IV for the complete condition) significantly lower in affect relative to the complete condition. Hypothesis four states that a subject exposed to stereotypically consistent information on the competence dimension only will rate a low-affect service provider (located in quadrant II or quadrant III for the complete condition) significantly higher in affect relative to the complete condition. Hypothesis five states that a subject exposed to stereotypically consistent information on the affect dimension only will rate a high-competence service provider (located in quadrant I or quadrant II for the complete condition) significantly lower in competence relative to the complete condition. Hypothesis six states that a subject exposed to stereotypically consistent information on the affect dimension only will rate a low-competence service provider (located in quadrant II or quadrant III for the complete condition) significantly higher in competence relative to the complete condition.

I use subjects taken from a sample provided by a national sampling firm, the composition of which mirrors the profile of a typical American consumer. Each subject reads a short scenario and then completes an associated questionnaire. Five conditions are necessary to test hypotheses one through six. The conditions form a two SPPF dimension information (competence-related only vs. affect-related only) x two SPPF

dimension valence (high (positive) scoring terms on a dimension vs. low (negative) scoring terms on a dimension) cell matrix with an additional control condition which is a compilation of stereotype-consistent traits for both the competence and affect dimension. While five cells make up the experiment, it is necessary to conduct the experiment on the three additional quadrants with different service provider types. A copy of the scenarios used is included in Appendix B, and a copy of the survey used is included in Appendix C.

Data analysis begins by using SPSS Statistics version 21 to conduct a principal component factor analysis to evaluate the competence and affect dimensions as discussed in the second pretest using the trait items provided by Fiske, Cuddy, Glick, and Xu (2002) as well as additional terms pertaining to service providers, and to validate the absolute competence and absolute warmth constructs as taken from Kervyn, Bergsieker, and Fiske (2012). Individual construct reliability is measured using coefficient alpha (Kerlinger and Lee 2000). For this study, the coefficient alpha for each construct should be greater than the .7 minimum described by Nunnally (1978) and repeated in Lance, Butts, and Michels (2006)

Each dependent measure is submitted to the 2 SPPF dimension information (competence-related only vs. affect-related only) x 2 SPPF dimension valence (high (positive) scoring terms on a dimension vs. low (negative) scoring terms on a dimension) x 1 (control) analysis of variance (ANOVA) with both experimental factors varying between subjects. Independent samples t-tests are used to examine the differences between the complete condition and each of the four incomplete conditions for each of the four service providers.

To ensure adequate power in an ANOVA test for large effect sizes and an alpha level equal to .10, Cohen (1992) suggests at least 13 respondents per cell when using five groups. To attain a minimum of 13 subjects per cell, a sample size of at least 65 is necessary per experiment. Thus, each experiment has at least 65 subjects, and in total the experiments have at least 260 subjects. In summary, 13 respondents are collected for each of five groups, an alpha level of .10 is used, and large effect sizes are found. Thus, the power level will exceed .80, which is acceptable for marketing studies.

Method Section for the Experiment

The experiment examines Research Questions 4a, and 4b. Research Question 4a focuses on the extent of the expected disconfirmation when service providers are affected by the innuendo effect, stereotype influence, and/or various service outcomes, and includes hypotheses seven and eight. Hypothesis seven states that subject exposed to a stereotypically inconsistent service provider delivering excellent performance will have higher positive attitudes toward the service provider than a subject exposed to a stereotypically consistent service provider also delivering excellent service. Hypothesis eight states that a subject exposed to a stereotypically inconsistent service provider and the innuendo effect will result in the strongest negative disconfirmation (a subject exposed to a stereotypically consistent service provider and the innuendo effect will result in a positive disconfirmation).

Research Question 4b focuses on the cognitive and affective effects when service providers are affected by the innuendo, stereotype influence, and/or various service outcomes, and includes hypotheses nine through twelve. Hypothesis nine states that a subject reporting negative disconfirmation will report lower satisfaction than a subject

with a positive or neutral disconfirmation (a subject with positive or neutral disconfirmation will report higher satisfaction than a subject with a negative disconfirmation). Hypothesis ten states that perceived quality is expected to mediate the relationship between disconfirmation and satisfaction. Hypothesis eleven states that a positive disconfirmation will result in positive behavioral intentions when the positive disconfirmation results from schema congruity (a negative disconfirmation will result in negative behavioral intentions when the negative disconfirmation results from schema incongruity). Hypothesis twelve states that a negative disconfirmation will result in a greater number of descriptive traits being recalled than will a positive disconfirmation.

Experiment Pretest

The primary purpose of the pretests in this section is to ensure the viability of the service encounter scenarios, the quality of the data manipulations, and the reliability and validity of measured constructs. A convenience sample is used to collect the needed data.

The pretest for the main study tests the manipulation of the stereotype, the innuendo effect, and the level of service rendered. Thus, a two (SPPF dimension information provided: competence-related only vs. affect-related only), x two (relative dimension valence: positive (high valence) scoring terms on a dimension vs. negative (low valence) scoring terms on a dimension), x two (stereotype consistency: consistent with the prototype vs. inconsistent with the prototype), x three (service outcome: excellent vs. average vs. below average) frame for testing these qualities requires that service providers match each of the conditions in the graphical schematic as seen in Figure 3.4. Because testing is being conducted on the innuendo effect study mentioned

above, additional pretest are not conducted for dimension information or dimension valence.

```
┌─────────────┐
│ Competence  │
│  Positive   │
└─────────────┘                           ┌──────────────┐
                                          │  Excellent   │
┌─────────────┐      ┌──────────────┐     │Service Outcome│
│ Competence  │      │  Stereotype  │     └──────────────┘
│  Negative   │      │  Consistent  │
└─────────────┘      └──────────────┘     ┌──────────────┐
                                          │   Average    │
┌─────────────┐      ┌──────────────┐     │Service Outcome│
│   Affect    │      │  Stereotype  │     └──────────────┘
│  Positive   │      │ Inconsistent │
└─────────────┘      └──────────────┘     ┌──────────────┐
                                          │ Below Average│
┌─────────────┐                           │Service Outcome│
│   Affect    │                           └──────────────┘
│  Negative   │
└─────────────┘
```
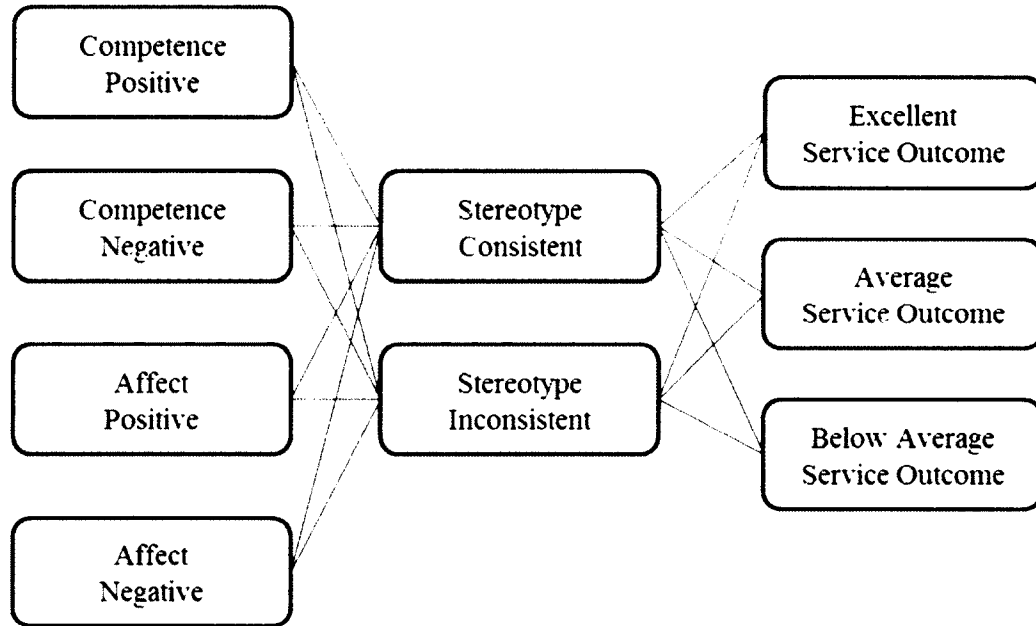
Figure 3.4 *Graphical Schematic of the 2 x 2 x 3 Testing Frame*

Each of the characteristic qualities is manipulated through the use of experimental design. Though each of the characteristics is individually manipulated, a consumer does not absorb the servicescape one element at a time. Instead, an individual in a servicescape perceives the environment holistically as the product of three dimensions: ambient conditions, the environments spatial layout, and the signs, symbols, and artifacts in the environment (Bitner 1992).

Subjects are told that they are going to read a scenario, and to please read carefully. The scenario consists of one combination of the graphical schema depicted above. Qualtrics randomly assigns subjects to one of 24 possible scenarios and does so in a manner to provide an even distribution of cells. After a specified amount of time, subjects are allowed to advance to the next screen containing the questions. To provide

an appropriate service provider for each combination, definitions are given to understand the components of each characteristic.

Conceptual Definitions and Measurement Scales

Stereotype

A stereotype is defined as "a cognitive structure or schema that contains the perceiver's knowledge, beliefs, and expectation about a human group" (i.e., a *"type"* of person) (Hamilton and Trolier 1986, p. 133). Because individuals hold and maintain stereotypes in a slightly different manner (based on geographical location), the sampling frame is limited to the southeastern United States. The stereotype consistent service provider is created using a compilation of stereotypical traits determined in the third pretest. The stereotype inconsistent service provider is created using a compilation of stereotypical traits (or trait anonyms) determined in the third pretest from the four service providers that are to be included in the study. A different stereotype-inconsistent service provider will be created for each study depicting opposing traits provided in the stereotype consistent scenario.

Innuendo

The innuendo effect describes the tendency for an individual to infer a negative conclusion about an unknown individual described with positive characteristics on either the competence or affect dimension, but not both. As shown by the cluster solutions and associated traits of the SPPF pretests and to be discussed in Chapter 4, service providers do not follow the positive/negative characteristics of the innuendo effect studied in psychology. The SPPF indicates varying placement of the positive (high) or negative (low) levels of competence and affect. In two off-diagonal quadrants of the SPPF, the

positive (high)/negative (low) characteristics of the service provider correlate with positive/negative characteristics studied in psychology, but this is not the case in the two opposing diagonal quadrants in which service providers are described with positive (high) characteristics on one dimension and negative (low) characteristics on the other dimension. Thus, it is more beneficial to evaluate a service provider on the traits that are consistent to the occupational category and assess the ability for an individual to infer a stereotype inconsistent conclusion about the service provider.

Service Outcome

The service outcome is manipulated in each scenario. Each service outcome provides information about the visit leading to one of three conclusions: excellent service, average service, or below-average service. The excellent-service scenario provides qualities that demonstrate the service encounter was above and beyond the average encounter with the specified type of provider. The average-service scenario provides characteristics associated to an encounter in which the associated service provider did not go out of his or her way to provide excellent service, but at the same time were better than a poor- or below-average provider. The below average-service scenario provides qualities that demonstrate the service encounter was below what would be expected in an average encounter, but not so low that subjects find the scenario implausible.

Experimental Design

The conducting of an online survey is performed using Qualtrics. I use subjects selected from Amazon's Mechanical Turk, the composition of which mirrors the profile of a typical American consumer. Each subject reads one scenario and completes a

questionnaire in separation from other respondents. This study meets the qualifications of an experiment put forth by Kerlinger and Lee (2000, Chapter 23) in that the subjects are randomly assigned to conditions and through manipulating sections of each subjects' respective scenario. Twenty-four total conditions result from the two (SPPF dimension information provided: competence-related only vs. affect-related only), x two (relative dimension valence: positive (high valence) scoring terms on a dimension vs. negative (low valence) scoring terms on a dimension), x two (stereotype consistency: consistent with the prototype vs. inconsistent with the prototype), x three (service outcome: excellent vs. average vs. below average) model. To get a complete picture of the full model, all 24 conditions are tested in the main experiment. A copy of the scenarios used is included in Appendix D, and a copy of the survey used is included in Appendix E.

Once again, subjects are told that they are going to read a scenario, and to please read carefully. Qualtrics randomly assigns subjects to one of 24 possible scenarios and does so in a manner to provide an even distribution of cells. After a specified amount of time, subjects are allowed to advance to the next screen containing the questions.

To determine the overall fit of the model, a CFA is performed to determine the most parsimonious fit. To do so, multiple tests are conducted. First, the Average Variance Extracted (AVE) is calculated from the standardized estimates and used to measure both construct reliability and discriminant validity. A Chi-Square test is conducted to measure the difference in the observed and estimated covariance matrix. Additional "fit" measures include the Comparative Fit Index (CFI) and the Root Mean Squared Error of Approximation (RMSEA). No one single test is used to determine

model validity, thus all tests are necessary. The General Linear Model (GLM), Linear Regression, and independent samples t-tests test the proposed hypotheses.

CHAPTER 4

EMPIRICAL RESULTS

The results and analysis section focuses on the methodology used to address the research questions about the impact of stereotypes and the innuendo effect on consumers' perceptions of service providers. Chapter 3 describes the procedures in detail illustrating that the data are gathered from two separate studies; the innuendo study and the main study.

Results of the innuendo study are presented first. The innuendo study seeks to answer research questions pertaining to the categorization of service providers on the dimensions of competence and affect, the movement within and between quadrants of the SPPF, and the innuendo effect as it applies to services marketing. Thus, this first section addresses Research Questions 1, 2, and 3. Research Question 1 focuses on the categorization of service providers based on the dimensions of competence and affect. Research Question 2 focuses on the movement within and between quadrants of the SPPF when subjects are provided incomplete information pertaining to the service provider. Research Question 3 focuses on the potential activation of a psychological innuendo effect, and the effect it has on consumers' perceptions of service providers.

The second part presents results of the main study. The main study seeks to answer questions pertaining to the change in perception of a service provider's

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Innuendo Study Design

The innuendo study uses written descriptions of four pre-selected service providers (Doctor, Lawyer, Hair Stylist, and Nail Technician) and requires subjects to determine their answers given their perception of the described service provider. The study is comprised of a 2 x 2 with control between subjects design. The factors of study consist of SPPF dimension information provided (competence-related only vs. affect-related only), relative dimension valence (positive (high) scoring terms on a dimension vs. negative (low) scoring terms on a dimension), and a control condition including service provider consistent information on both the competence and affect dimensions. In each cell of the 2 x 2 matrix subjects are presented with a short scenario using three pieces of information to describe the service provider. For example, the dimension on which information is provided is manipulated as follows for the doctor scenario: in the relatively high competence dimension the doctor is described with the following information:

"This doctor attended a prestigious medical school, is associated with a well-known hospital, and has published research on neurology."

In the relatively low competence dimension the doctor is described with the following information:

"This doctor attended a regional medical school, is associated with a local clinic, and refers to webmd.com."

Four separate experiments (or sub-studies) following this implementation are designed to capture each of the four service provider quadrants within the service provider perception framework.

Methodology

Four separate experiments (or sub-studies), one representing reactions to the experimental manipulations for each SPPF service provider type studied, provide data for the analyses reported in this section. Qualtrics online survey platform was used to design and gather data for the innuendo study. Survey participants are members of a national consumer panel accessed through Qualtrics. Criteria for eligibility to complete the survey included individuals between the ages of 25 and 65, residing in the southeastern United States (defined as the following states: Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas), who are head of household, and where the panel member or his/her spouse is employed full time. The sampling frame is restricted to the southeastern United States to help maintain a consistent stereotype for each service provider across the sample. One additional requirement for the innuendo study involving the nail technician is that subjects must be female. This is done to maintain relevance.

Data collection took place during the fall 2013 academic quarter. Potential subjects were invited by the panel company to take part in a survey that dealt with consumers' opinions about service providers. A service provider was defined as an individual that provides service to other entities. Basic descriptive statistics for each of the four experiments follow, directly followed by detailed results displaying the manipulation checks and hypotheses tests.

Descriptive Statistics: Innuendo Study

Doctor

The sample for the doctor condition contains a total of 108 subjects. Female subjects comprise 56 percent of the sample. The median age of subjects is 42 years of age with the youngest subject at 24 years of age and the oldest subject at 65 years of age. Fifty-two percent of the sample has completed a four-year college degree or higher.

Lawyer

The sample for the lawyer condition contains a total of 106 subjects. Female subjects comprise 43 percent of the sample. The median age of subjects is 43 years of age with the youngest subject at 24 years of age and the oldest subject at 64 years of age. Fifty percent of the sample has completed a four-year college degree or higher.

Hair Stylist

The sample for the hair stylist condition contains a total of 104 subjects. Female subjects comprise 43 percent of the sample. The median age of subjects is 42.5 years of age with the youngest subject at 25 years of age and the oldest subject at 64 years of age. Fifty-seven percent of the sample has completed a four-year college degree or higher.

Nail Technician

The sample for the nail technician condition contains a total of 97 subjects. Female subjects comprise 100 percent of the sample. The median age of subjects is 47 years of age with the youngest subject at 24 years of age and the oldest subject at 64 years of age. Forty-five percent of the sample has completed a four-year college degree or higher.

Table 4.1 presents the demographics for subjects in the doctor, lawyer, hair stylist, and nail technician conditions. The demographics for each service provider are representative of the respective clientele, thus the manipulation checks follow.

Table 4.1

Innuendo Study Descriptive Statistics

	Doctor	Lawyer	Hair Stylist	Nail Technician
Gender				
Male	58	47	59	0
Female	50	59	45	97
Age				
30 or Under	17	19	24	16
31 - 40	28	29	23	20
41 - 50	26	32	24	27
51 - 60	31	23	28	29
61 or Over	6	3	5	5
Education				
Less than High School	2	0	1	0
High School / GED	11	14	12	13
Some College	30	27	19	25
2-year College Degree	15	10	15	14
4-year College Degree	43	40	37	31
Masters Degree	5	13	18	7
Doctoral Degree	0	2	1	3
Professional Degree	2	0	1	4
Ethnicity				
White	87	74	83	84
Hispanic or Latino	1	11	5	6
Black or African American	10	12	15	5
Native American / American Indian	3	1	0	1
Asian / Pacific Islander	5	3	1	0
Other	0	5	0	1

Innuendo Study: Manipulations

To test whether the dimension information and dimension valence were successfully manipulated, manipulation checks are performed based on the subjects' responses. Two manipulation checks are performed for each manipulation. This section examines the validity of each of the manipulations.

The first manipulation check for dimension information involves a multiple choice question where the subject is prompted with the following information: "According to the scenario, the colleague described the service provider with terms addressing:" and the subject selects one of the following choices: competence, affect or both (competence and affect). The second manipulation check on dimension information involves a slider scale where the subject is prompted with the following information: "Based on the scenario, the colleague described the service provider with terms addressing:" and the subject moves the slider where affect = 0 and competence = 100.

The first manipulation check for dimension valence (relatively positive or negative) involves a multiple choice question where the subject is prompted with the following information: "According to the scenario, the colleague described the service provider with terms that were:" and the subject selects the best choice: positive, negative, both (positive and negative), or neither (positive nor negative). The second manipulation check on dimension valence involves a slider scale where the subject is prompted with the following information: "Based on the scenario, the colleague described the service provider with terms that were:" and the subject moves the slider where negative = 0 and positive = 100.

Manipulation Check Results

The first manipulation check for each experimental condition involves a cross-classification of the subjects' responses to the manipulation check items within each experimental condition. The rows in the cross-classification are made up of the experimental condition; dimension information or dimension valence. The columns consist of the responses to the experimental condition manipulation. A chi-square test examines whether responses vary by condition.

The second manipulation check for each experimental condition involves a mean comparison of subjects' responses to the 100 point slider scale within each experimental condition. A one way ANOVA is used to compare the manipulation check by the experimental condition.

Doctor

In the doctor condition, the first manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 4 df) = 72.2 (p < .001); (χ^2 (dimension valence 6 df) = 69.1 (p < .001).

Analysis of the dimension information manipulation reveals that 19 of the 22 subjects in the complete condition correctly classified the scenario as containing both competence and affect information. Additionally, 29 of the 42 subjects in the competence only condition correctly classified the scenario as containing competence information only, while 13 of the 42 subjects in the competence only condition classified the scenario as both competence and affect information. Lastly, 22 of the 42 subjects in the affect only condition correctly classified the scenario as containing affect information

only, while 18 of the 42 subjects in the affect only condition classified the scenario as both competence and affect information. Only two subjects expressed the contrasting belief when provided competence dimension information. One explanation as to why subjects in the competence only or affect only condition selected both competence and affect for dimension information is because subjects might automatically generate the missing information to alleviate the problem of being provided information on only one dimension.

Analysis of the dimension valence manipulation reveals that 22 of the 22 subjects in the complete condition correctly classified the scenario as containing positive information only. Additionally 42 of the 43 subjects in the positive only condition correctly classified the scenario as containing positive information only. Lastly, 20 of the 41 subjects in the negative only condition correctly classified the scenario as containing negative information only. Nine subjects expressed the contrasting belief when provided negative dimension information.

The second manipulation check is associated with a significant F statistic with the pattern of responses in the corresponding direction for each manipulation (F $_{(dimensions\ information\ 2\ df)}$ = 18.6 (p < .001); (F $_{(dimension\ valence\ 1\ df)}$ = 137.9 (p < .001).

Analysis of the dimension information manipulation reveals a mean of 64.6 for the complete condition in which both competence and affect are used in the scenario. A mean of 75.8 for the competence conditions indicates a higher level of competence in the competence only condition. A mean of 42.7 for the affect conditions indicates a higher level of affect in the affect only condition. A mean comparison reveals the competence

only condition is significantly different from the affect only condition (t (82) = 5.7, p < .001).

Analysis of the dimension valence manipulation reveals a mean of 89.5 for the complete condition in which the doctor was described using positive information on both the competence and affect dimensions in the scenario. A mean of 92.3 for the positive conditions indicates a higher level of positively stated items. A mean of 40.9 for the negative conditions indicates a higher level of negatively stated items. A mean comparison reveals the positive only valence is significantly different from the negative only valence (t (82) = 10.0, p < .001).

In summary, the manipulations appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided and what the relative valence of the incomplete information is. Table 4.2 illustrates the data from which the χ^2 and F values are derived.

Table 4.2

Innuendo Study Doctor Manipulation Checks

<u>DOCTOR CONDITION</u>

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Complete	2	1	19	22
Competence	29	0	13	42
Affect	2	22	18	42
Total	33	23	50	106

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Complete	22	0	0	0	22
Positive	42	0	1	0	43
Negative	9	20	8	4	41
Total	73	20	9	4	106

Dimension Information Check

Dimension	Complete	Competenc	Affect	Total
Mean	64.6	75.8	42.7	60.4
N	22	42	42	106

Dimension Valence Check

Dimension Valence	Complete	Positive	Negative	Total
Mean	89.5	92.3	40.9	71.8
N	22	43	41	106

Lawyer

The first manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 4 df) = 60.2 (p < .001); (χ^2 (dimension valence 6 df) = 80.5 (p < .001).

Analysis of the dimension information manipulation reveals that 19 of the 25 subjects in the complete condition correctly classified the scenario as containing both competence and affect information. Additionally, 24 of the 42 subjects in the competence only condition correctly classified the scenario as containing competence

information only, while 15 of the 42 subjects in the competence only condition classified the scenario as both competence and affect information. Lastly, 25 of the 41 subjects in the affect only condition correctly classified the scenario as containing affect information only, while 15 of the 41 subjects in the affect only condition classified the scenario as both competence and affect information. Only three subjects expressed the contrasting belief when provided incomplete information on the competence dimension and one subject expressed the contrasting belief when provided incomplete information on the affect dimension.

Analysis of the dimension valence manipulation reveals that 20 of the 25 subjects in the complete condition correctly classified the scenario as containing both positive (competence) and negative (affect) information. Additionally 34 of the 40 subjects in the positive only condition correctly classified the scenario as containing positive information only. Lastly, 17 of the 43 subjects in the negative only condition correctly classified the scenario as containing negative information only. Only three subjects expressed the contrasting belief when provided negative dimension information.

The second manipulation check is associated with a significant F statistic with the pattern of responses in the corresponding direction for each manipulation (F $_{(dimensions\ information\ 2\ df)}$ = 10.8 (p < .001); (F $_{(dimension\ valence\ 2\ df)}$ = 62.8 (p < .001).

Analysis of the dimension information manipulation reveals a mean of 68.6 for the complete condition in which both competence and affect are used in the scenario. A mean of 66.0 for the competence conditions indicates a higher level of competence in the competence only condition. A mean of 42.7 for the affect conditions indicates a higher level of affect in the affect only condition. A mean comparison reveals the competence

only condition is significantly different from the affect only condition (t (81) = 4.0, p < .001).

Analysis of the dimension valence manipulation reveals a mean of 57.3 for the complete condition in which the lawyer is described using positive information on the competence dimension and negative information on the affect dimension in the scenario. A mean of 88.2 for the positive conditions indicates a higher level of positively stated items. A mean of 39.3 for the negative conditions indicates a higher level of negatively stated items. A mean comparison reveals the positive only valence is significantly different from the negative only valence (t (81) = 11.3, p < .001).

In summary, the manipulation checks appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided and what the relative valence of the incomplete information is. Table 4.3 illustrates the data from which the χ^2 and F values are derived.

Table 4.3

Innuendo Study Lawyer Manipulation Checks

LAWYER CONDITION

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Complete	6	0	19	25
Competence	24	3	15	42
Affect	1	25	15	41
Total	31	28	49	108

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Complete	3	2	20	0	25
Positive	34	0	4	2	40
Negative	3	17	20	3	43
Total	40	19	44	5	108

Dimension Information Check

Dimension	Complete	Competenc	Affect	Total
Mean	68.6	66.0	42.7	57.7
N	25	42	41	108

Dimension Valence Check

Dimension Valence	Complete	Positive	Negative	Total
Mean	57.3	88.2	39.3	61.6
N	25	40	43	108

Hair Stylist

The first manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 4 df) = 81.4 (p < .001); (χ^2 (dimension valence 6 df) = 23.4 (p < .001).

Analysis of the dimension information manipulation reveals that 14 of the 19 subjects in the complete condition correctly classified the scenario as containing both competence and affect information. Additionally, 35 of the 40 subjects in the competence only condition correctly classified the scenario as containing competence

information only, while five of the 40 subjects in the competence only condition classified the scenario as both competence and affect information. Lastly, 26 of the 45 subjects in the affect only condition correctly classified the scenario as containing affect information only, while 16 of the 45 subjects in the affect only condition classified the scenario as both competence and affect information. Three subjects expressed the contrasting belief when provided incomplete information on the affect dimension.

Analysis of the dimension valence manipulation reveals that eight of the 19 subjects in the complete condition correctly classified the scenario as containing both positive (affect) and negative (competence) information. Additionally 38 of the 42 subjects in the positive only condition correctly classified the scenario as containing positive information only. Lastly, zero of the 43 subjects in the negative only condition correctly classified the scenario as containing negative information only. However, 20 of the 43 subjects expressed the contrasting belief when provided negative dimension information. One explanation as to why subjects in the negative condition selected positive as the dimension valence is because subjects might evaluate the words themselves, which are not overtly negative, rather than the words in the context describing the service provider, which then portrays a negative (low) image.

The second manipulation check is associated with a significant F statistic with the pattern of responses in the corresponding direction for each manipulation (F $_{(dimensions\ information\ 2\ df)}$ = 32.0 (p < .001); (F $_{(dimension\ valence\ 2\ df)}$ = 23.89 (p < .001).

Analysis of the dimension information manipulation reveals a mean of 44.0 for the complete condition in which both competence and affect are used in the scenario. A mean of 83.3 for the competence conditions indicates a higher level of competence in the

competence only condition. A mean of 42.4 for the affect conditions indicates a higher level of affect in the affect only condition. A mean comparison reveals the competence only condition is significantly different from the affect only condition (t (83) = 7.1, p < .001).

Analysis of the dimension valence manipulation reveals a mean of 69.7 for the complete condition in which the hair stylist is described using positive information on the affect dimension and negative information on the competence dimension in the scenario. A mean of 90.9 for the positive conditions indicates a higher level of positively stated items. A mean of 66.7 for the negative conditions indicates a higher level of negatively stated items. A mean comparison reveals the positive only valence is significantly different from the negative only valence (t (83) = 7.0, p < .001).

In summary, the manipulations appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided and what the relative valence of the incomplete information is. Table 4.4 illustrates the data from which the χ^2 and F values are derived.

Table 4.4

Innuendo Study Hair Stylist Manipulation Checks

HAIR STYLIST CONDITION

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Complete	3	2	14	19
Competence	35	0	5	40
Affect	3	26	16	45
Total	41	28	35	104

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Complete	9	0	8	2	19
Positive	38	0	2	2	42
Negative	20	0	13	10	43
Total	67	0	23	14	104

Dimension Information Check

Dimension	Complete	Competenc	Affect	Total
Mean	44.0	83.3	42.4	58.4
N	19	40	45	104

Dimension Valence Check

Dimension Valence	Complete	Positive	Negative	Total
Mean	69.7	90.9	66.7	77.0
N	19	42	43	104

Nail Technician

The first manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 4 df) = 62.0 (p < .001); (χ^2 (dimension valence 6 df) = 57.3 (p < .001).

Analysis of the dimension information manipulation reveals that 13 of the 18 subjects in the complete condition correctly classified the scenario as containing both competence and affect information. Additionally, 25 of the 38 subjects in the competence only condition correctly classified the scenario as containing competence

information only, while 12 of the 38 subjects in the competence only condition classified the scenario as both competence and affect information. Lastly, 25 of the 41 subjects in the affect only condition correctly classified the scenario as containing affect information only, while 16 of the 41 subjects in the affect only condition classified the scenario as both competence and affect information. One subject expressed the contrasting belief when provided incomplete information on the competence dimension.

Analysis of the dimension valence manipulation reveals that three of the 18 subjects in the complete condition correctly classified the scenario as containing only negative information. Additionally 38 of the 40 subjects in the positive only condition correctly classified the scenario as containing positive information only. Lastly, eight of the 39 subjects in the negative only condition correctly classified the scenario as containing negative information only. Eleven of the 39 subjects expressed the contrasting belief when provided negative dimension information. Again, one explanation as to why subjects in the negative condition selected positive as the dimension valence is because subjects might evaluate the words themselves, which are not overtly negative, rather than the words in the context describing the service provider which then portrays a negative (low) image.

The second manipulation check is associated with a significant F statistic with the pattern of responses in the corresponding direction for each manipulation (F $_{(dimensions\ information\ 2\ df)}$ = 33.6 (p < .001); (F $_{(dimension\ valence\ 2\ df)}$ = 51.3 (p < .001).

Analysis of the dimension information manipulation reveals a mean of 53.3 for the complete condition in which both competence and affect are used in the scenario. A mean of 80.1 for the competence conditions indicates a higher level of competence in the

competence only condition. A mean of 37.4 for the affect conditions indicates a higher level of affect in the affect only condition. A mean comparison reveals the competence only condition is significantly different from the affect only condition (t (77) = 8.1, p < .001).

Analysis of the dimension valence manipulation reveals a mean of 40.3 for the complete condition in which the nail technician was described using negative information on both the competence and affect dimensions in the scenario. A mean of 93.3 for the positive conditions indicates a higher level of positively stated items. A mean of 51.2 for the negative conditions indicates a higher level of negatively stated items. A mean comparison reveals the positive only valence is significantly different from the negative only valence (t (77) = 8.1, p < .001).

In summary, the manipulations appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided and what the relative valence of the incomplete information is. Table 4.5 illustrates the data from which the χ^2 and F values are derived.

Table 4.5

Innuendo Study Nail Technician Manipulation Checks

<u>NAIL TECHNICIAN CONDITION</u>

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Complete	4	1	13	18
Competence	25	1	12	38
Affect	0	25	16	41
Total	29	27	41	97

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Complete	1	3	13	1	18
Positive	38	0	2	0	40
Negative	11	8	16	4	39
Total	80	11	31	5	97

Dimension Information Check

Dimension	Complete	Competenc	Affect	Total
Mean	53.3	80.1	37.4	57.1
N	18	38	41	97

Dimension Valence Check

Dimension Valence	Complete	Positive	Negative	Total
Mean	40.3	93.3	51.2	66.5
N	18	40	39	97

Confounding Manipulation Checks

The first manipulation check for each experimental condition involves a cross-classification of the subjects' responses with noncorresponding variables of the manipulation check items within each experimental condition. The second manipulation check for each experimental condition involves a mean classification of the subjects' responses with noncorresponding variables to the manipulation check items within each experimental condition. This analysis measures whether any unintended effects arose from the manipulations. For example, manipulating dimension information should only

affect the manipulation check for dimension information (competence or affect), not dimension valence (positive or negative).

Doctor

The first manipulation shows the following results (χ^2 (dimension information by dimension valence manipulation check 6 df) $= 36.4$ (p $< .001$); (χ^2 (dimension valence by dimension information manipulation check 4 df) $= 18.3$ (p $< .05$). The second manipulation shows the following results (F (dimensions information by dimension valence manipulation 2 df) $= 7.7$ (p $< .05$); (F (dimension valence by dimension information manipulation 2 df) $= .5$ (p $= .63$). Table 4.6 illustrates the data from which the χ^2 and F values of the confounding checks are derived.

Table 4.6

Innuendo Study Doctor Confounding Checks

DOCTOR CONDITION

Dimension Valence Check

Dimension	Positive	Negative	Both	Neither	Total
Complete	22	0	0	0	22
Competence	30	2	6	4	42
Affect	21	18	3	0	42
Total	73	20	9	4	106

Dimension Information Check

Dimension Valence	Competenc	Affect	Both	Total
Complete	2	1	19	22
Positive	14	13	16	43
Negative	17	9	15	41
Total	33	23	50	106

Dimension Valence Check

Dimension	Complete	Competenc	Affect	Total
Mean	89.5	75.7	58.8	71.9
N	22	42	42	106

Dimension Information Check

Dimension Valence	Complete	Positive	Negative	Total
Mean	64.6	61.1	57.3	60.4
N	22	43	41	106

Lawyer

The first manipulation check shows the following results (χ^2 (dimension information by dimension valence manipulation check 6 df) $= 26.7$ (p < .001); (χ^2 (dimension valence by dimension information manipulation check 4 df) $= 16.3$ (p < .05). The second manipulation check shows the following results (F (dimensions information by dimension valence manipulation 2 df) $= 1.3$ (p = .267); (F (dimension valence by dimension information manipulation 2 df) $= 3.7$ (p < .05). Table 4.7 illustrates the data from which the χ^2 and F values of the confounding checks are derived.

Table 4.7

Innuendo Study Lawyer Confounding Checks

LAWYER CONDITION

Dimension Valence Check

Dimension	Positive	Negative	Both	Neither	Total
Complete	3	2	20	0	25
Competence	20	4	14	4	42
Affect	17	13	10	1	41
Total	40	19	44	5	108

Dimension Information Check

Dimension Valence	Competenc	Affect	Both	Total
Complete	6	0	19	25
Positive	14	13	13	40
Negative	11	15	17	43
Total	31	28	49	108

Dimension Valence Check

Dimension	Complete	Competenc	Affect	Total
Mean	57.3	67.3	58.3	61.6
N	25	42	41	108

Dimension Information Check

Dimension Valence	Complete	Positive	Negative	Total
Mean	68.6	59.6	49.7	57.7
N	25	40	43	108

Hair Stylist

The first manipulation check shows the following results (χ^2 (dimension information by dimension valence manipulation check 6 df) $= 5.5$ (p = .244); (χ^2 (dimension valence by dimension information manipulation check 4 df) $= 27.4$ (p < .001). The second manipulation check shows the following results (F (dimensions information by dimension valence manipulation 2 df) $= 2.0$ (p = .14); (F (dimension valence by dimension information manipulation 2 df) $= 5.3$ (p < .05). Table 4.8 illustrates the data from which the χ^2 and F values of the confounding checks are derived.

Table 4.8

Innuendo Study Hair Stylist Confounding Checks

<u>HAIR STYLIST CONDITION</u>

	Dimension Valence Check				
Dimension	Positive	Negative	Both	Neither	Total
Complete	9	0	8	2	19
Competence	27	0	7	6	40
Affect	31	0	8	6	45
Total	67	0	23	14	104

	Dimension Information Check			
Dimension Valence	Competenc	Affect	Both	Total
Complete	3	2	14	19
Positive	18	19	5	42
Negative	20	7	16	43
Total	41	28	35	104

	Dimension Valence Check			
Dimension	Complete	Competenc	Affect	Total
Mean	69.7	81.0	76.6	77.0
N	19	40	45	104

	Dimension Information Check			
Dimension Valence	Complete	Positive	Negative	Total
Mean	44.0	53.9	69.3	58.4
N	19	42	43	104

Nail Technician

The first manipulation check shows the following results (χ^2 (dimension information by dimension valence manipulation check 6 df) $= 33.3$ (p < .001); (χ^2 (dimension valence by dimension information manipulation check 4 df) $= 10.7$ (p < .05). The second manipulation check shows the following results (F (dimensions information by dimension valence manipulation 2 df) $= 12.8$ (p < .001); (F (dimension valence by dimension information manipulation 2 df) $= .2$ (p = .83). Table 4.9 illustrates the data from which the χ^2 and F values of the confounding checks are derived.

Table 4.9

Innuendo Study Nail Technician Confounding Checks

<u>NAIL TECHNICIAN CONDITION</u>

Dimension	*Dimension Valence Check*				
Dimension	Positive	Negative	Both	Neither	Total
Complete	1	3	13	1	18
Competence	27	0	7	4	38
Affect	22	8	11	0	41
Total	50	11	31	5	97

Dimension Valence	*Dimension Information Check*			
Dimension Valence	Competenc	Affect	Both	Total
Complete	4	1	13	18
Positive	11	12	17	40
Negative	14	14	11	39
Total	29	27	41	97

Dimension	*Dimension Valence Check*			
Dimension	Complete	Competenc	Affect	Total
Mean	40.3	81.1	64.6	66.5
N	18	38	41	97

Dimension Valence	*Dimension Information Check*			
Dimension Valence	Complete	Positive	Negative	Total
Mean	53.3	58.4	57.4	57.1
N	18	40	39	97

After evaluation of the manipulation checks and confounding checks, strong evidence exists for the validity of both the dimension information and dimension valence manipulations. To maintain a conservative approach the mismatching subjects (those who missed the manipulation check question) are retained, rather than discarded from further evaluation. In conclusion, the manipulation checks appear to have worked as intended and analysis will continue.

Innuendo Study Results

The innuendo results are discussed in three parts. The first part seeks to address the categorization of service providers based on the dimensions of competence and affect, and then assesses whether the differences in dimensions are predictive of service outcomes in some way. Thus, it seeks to address Research Question 1. The second part seeks to address the movement within and between quadrants of the SPPF when subjects are affected by incomplete information. Thus, it seeks to address Research Question 2. The third part seeks to address the applicability of the innuendo effect on consumers' perceptions of service providers. Thus, it seeks to address Research Question 3. The data from the four separate service provider type sub-studies are aggregated before proceeding with the analysis.

Twenty-four trait items relating to competence and affect are factor analyzed using principal component analysis with Varimax rotation. Consistent with the pretest results of the SPPF, two dimensions emerge with which to classify service providers: competence and affect. This finding is consistent with previous research on social perception by Fiske et al. (2002). The two factors explain a total of 67 percent of the variance. The first factor is labeled 'Competence' due to the high loadings of the following trait items: capable, competent, confident, efficient, intelligent, professional, skillful, up to date, and tidy/neat. The first factor explains 35.7 percent of the variance. The second factor is labeled 'Affect' due to the high loadings of the following trait items: cold, empathetic, friendly, good natured, irritable, pleasant, sincere, and warm. The second factor explains 31.3 percent of the variance. Trait items cold and irritable are

reverse coded. Table 4.10 illustrates the factor loadings, factor reliability, and percent of variance explained by each of the two factors.

Table 4.10

Innuendo Study Factor Loadings, Reliability, Percent of Variance

Term	Competence	Affect
Capable	0.85	
Competent	0.83	
Confident	0.83	
Efficient	0.84	
Intelligent	0.85	
Professional	0.80	
Skillful	0.90	
Tidy/Neat	0.82	
Up To Date	0.74	
Cold		0.85
Empathetic		0.74
Friendly		0.91
Good Natured		0.90
Irritable		0.82
Pleasant		0.90
Sincere		0.76
Warm		0.92
Reliability	0.96	0.96
% of Variance	35.7	31.3

Part One: Service Provider Categorization

Part one centers on Research Question 1. Research Question 1 focuses on the categorization of service providers based on the dimensions of competence and affect. Following factor analysis, the mean standardized factor scores for each service provider type are plotted on each dimension. The complete condition for each service provider type is plotted to confirm placement in the SPPF from the pretests discussed in Chapter 3. Pretesting for the SPPF revealed placement of the doctor as high competence/high affect, the lawyer as high competence/low affect, the hair stylist as low competence/high affect,

and the nail technician as low competence/low affect. Figure 4.1 displays placement of each service provider using the mean standardized factor scores for each factor based on the complete condition in which subjects read stereotypically consistent information on both the competence and affect dimensions. Thus, each service provider is viewed in the complete condition of the main study in the same manner as in pretest 3. The results of each of the four service providers plotted in the complete condition confirm those results found in the SPPF pretests.

```
High   ◆ Hair                              Doctor ◆
         Stylist




  Affect




         ◆ Nail
Low      Technician
                                                    Lawyer ◆

       Low              Competence              High
```
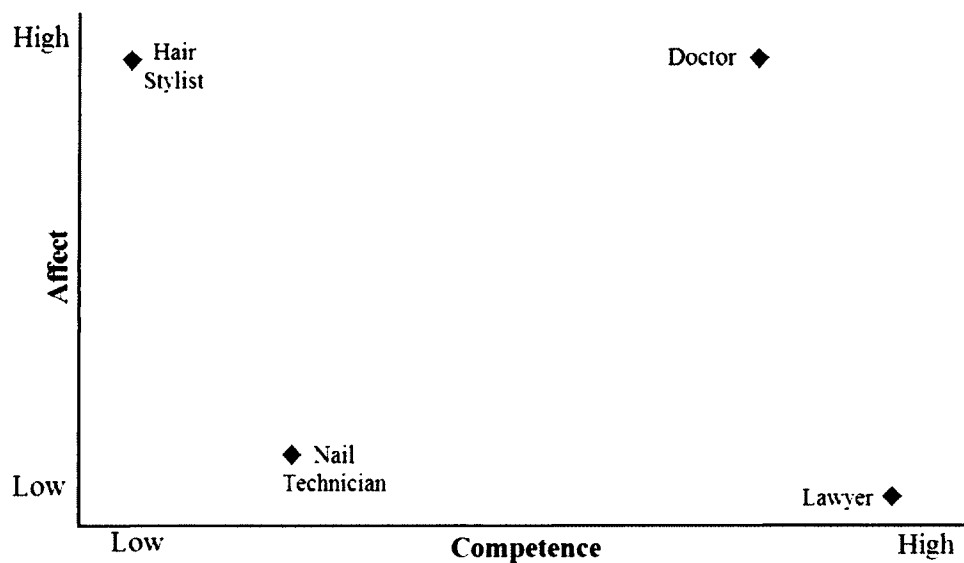
Figure 4.1 *Service Provider Confirmation from Pretest Section*

Part Two: Movement Within and Between Clusters

Part two centers on Research Question 2. Research Question 2 focuses on the movement within and between quadrants of the SPPF when subjects are presented with incomplete information on only one SPPF dimension. Hypothesis one states that a subject exposed to stereotypically consistent information on only one dimension of the SPPF will result in a significant shift on that dimension in the direction of the

consistency. Hypothesis two states that a subject exposed to stereotypically inconsistent information on only one dimension of the SPPF will result in a significant shift on that dimension in the direction of the inconsistency.

Table 4.11 presents the standardized factor scores for each of the four service provider types by each of the five conditions. Movement within and between quadrants of the SPPF is seen with each of the four manipulated incomplete information conditions for each of the four service providers. Results for each service provider condition are described in detail below.

Table 4.11

Innuendo Study Standardized Factor Scores

	Complete	Competence Positive	Competence Negative	Affect Positive	Affect Negative
Doctor					
Competence	0.46	0.96	-0.39	0.16	-1.3
Affect	0.76	0.03	0.36	1.1	-1.3
Lawyer					
Competence	0.67	0.75	-1.1	-0.13	0.08
Affect	-1.4	-0.18	0.27	0.83	-1.8
Hair Stylist					
Competence	-0.53	0.62	-0.24	-0.41	0.36
Affect	0.75	0.03	0.18	0.88	-0.08
Nail Technician					
Competence	-0.28	0.68	0.06	-0.18	-0.43
Affect	-1.2	0.38	0.53	0.91	-1.1

Doctor

The first group of subjects evaluated a complete stereotype consistent description (positive information provided on both the competence and affect dimensions), or one of four incomplete descriptions containing either competence information only or affect information only. The stereotypically consistent complete condition places the doctor in

quadrant I. Hypothesis one is tested using the positive (high) competence only condition and the positive (high) affect only condition. Hypothesis two is tested using the negative (low) competence only condition and the negative (low) affect only condition.

In the complete condition subjects report a mean competence score of .46 and a mean affect score of .76. Independent samples t-tests are used to examine the differences between the complete condition and each of the four incomplete doctor conditions.

The difference between the complete condition (.46) and the competence positive condition (.96) is significant in the competence dimension $t(41) = -3.14$, $p < .01$. The difference between the complete condition (.76) and the competence positive condition (.03) is significant in the affect dimension $t(41) = 4.2$, $p < .001$. Placement of the doctor in the positive (high) competence only condition resides in quadrant I, the same quadrant as the complete condition. Hypothesis one is supported because subjects' ratings of the doctor on the competence dimension are significantly higher in the competence positive only condition than in the complete condition.

The difference between the complete condition (.46) and the competence negative condition (-.39) is significant in the competence dimension $t(41) = 3.11$, $p < .01$. The difference between the complete condition (.76) and the competence negative condition (.36) is significant in the affect dimension $t(41) = 3.2$, $p < .01$. Placement of the doctor in the negative (low) competence only condition moves from quadrant I to quadrant IV. Hypothesis two is supported because subjects' ratings of the doctor on the competence dimension are significantly lower in the competence negative only condition than in the complete condition.

The difference between the complete condition (.46) and the affect positive condition (.16) is not significant in the competence dimension t(42) = 1.4, p = .169. The difference between the complete condition (.76) and the affect positive condition (1.1) is significant in the affect dimension t(42) = -3.5, p < .01. Placement of the doctor in the positive (high) affect only condition resides in quadrant I, the same quadrant as the complete condition. Hypothesis one is supported because subjects' ratings of the doctor on the affect dimension are significantly higher in the affect positive only condition than in the complete condition.

The difference between the complete condition (.46) and the affect negative condition (-1.3) is significant in the competence dimension t(40) = 6.8, p < .001. The difference between the complete condition (.76) and the affect negative condition (-1.3) is significant in the affect dimension t(40) = 21.1, p < .001. Placement of the doctor in the negative (low) affect only condition moves from quadrant I to quadrant III. Hypothesis two is supported because subjects' ratings of the doctor on the affect dimension are significantly lower in the affect negative only condition than in the complete condition.

Table 4.12 displays H_1 and H_2 for the doctor and Figure 4.2 displays the movement within and between quadrants of the SPPF for each incomplete condition relative to the complete condition for the doctor.

Table 4.12

Innuendo Study Doctor H₁ and H₂

Condition	Hypothesis 1 Supported	Hypothesis 2 Supported
Competence Positive	Yes	NA
Competence Negative	NA	Yes
Affect Positive	Yes	NA
Affect Negative	NA	Yes
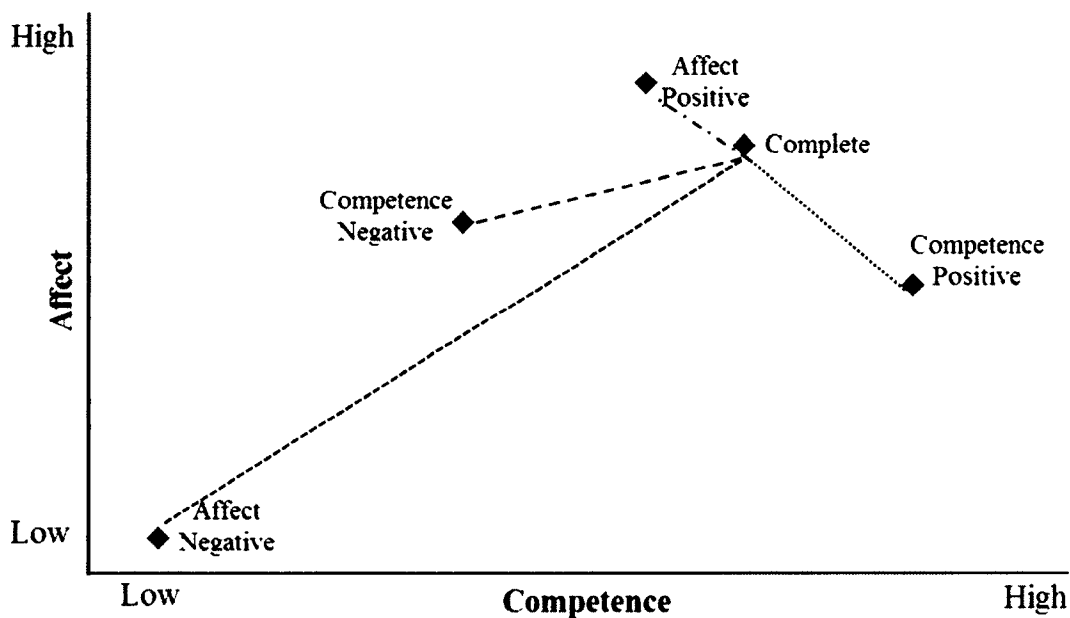
Figure 4.2 *Innuendo Study Doctor Condition*

Lawyer

A second group of subjects evaluated a complete stereotype consistent description (positive information provided on the competence dimension and negative information provided on the affect dimension), or one of four incomplete descriptions containing either competence information only or affect information only. The stereotypically consistent complete condition places the lawyer in quadrant II. Hypothesis one is tested using the positive (high) competence only condition and the negative (low) affect only

condition. Hypothesis two is tested using the negative (low) competence only condition and the positive (high) affect only condition.

In the complete condition subjects report a mean competence score of .67 and a mean affect score of -1.4. Independent samples t-tests are used to examine the differences between the complete condition and each of the four incomplete lawyer conditions.

The difference between the complete condition (.67) and the competence positive condition (.75) is not significant in the competence dimension $t(43) = -.43$, $p = .67$. The difference between the complete condition (-1.4) and the competence positive condition (-.18) is significant in the affect dimension $t(43) = -6.9$, $p < .001$. Placement of the lawyer in the positive (high) competence only condition resides in quadrant II, the same quadrant as the complete condition. Hypothesis one is not supported because subjects' ratings of the lawyer on the competence dimension are not significantly higher in the competence positive only condition than in the complete condition.

The difference between the complete condition (.67) and the competence negative condition (-1.1) is significant in the competence dimension $t(45) = 7.2$, $p < .001$. The difference between the complete condition (-1.4) and the competence negative condition (.27) is significant in the affect dimension $t(45) = -10.79$, $p < .001$. Placement of the lawyer in the negative (low) competence only condition moves from quadrant II to quadrant IV. Hypothesis two is supported because subjects' ratings of the lawyer on the competence dimension are significantly lower in the competence negative only condition than in the complete condition.

The difference between the complete condition (.67) and the affect positive condition (-.13) is significant in the competence dimension $t(43) = 3.18$, $p < .01$. The difference between the complete condition (-1.4) and the affect positive condition (.83) is significant in the affect dimension $t(43) = -14.97$, $p < .001$. Placement of the lawyer in the positive (high) affect only condition moves from quadrant II to quadrant IV. Hypothesis two is supported because subjects' ratings of the lawyer on the affect dimension are significantly higher in the affect positive only condition than in the complete condition.

The difference between the complete condition (.67) and the affect negative condition (.08) is significant in the competence dimension $t(44) = 2.0$, $p < .1$. The difference between the complete condition (-1.4) and the affect negative condition (-1.8) is significant in the affect dimension $t(44) = 2.6$, $p < .05$. Placement of the lawyer in the negative (low) affect only condition resides in quadrant II, the same quadrant as the complete condition. Hypothesis one is supported because subjects' ratings of the lawyer on the affect dimension are significantly lower in the affect negative only condition than in the complete condition.

Table 4.13 displays H_1 and H_2 for the lawyer and Figure 4.3 displays the movement within and between quadrants of the SPPF for each incomplete condition relative to the complete condition for the lawyer.

Table 4.13

Innuendo Study Lawyer H₁ and H₂

Condition	Hypothesis 1 Supported	Hypothesis 2 Supported
Competence Positive	No	NA
Competence Negative	NA	Yes
Affect Positive	NA	Yes
Affect Negative	Yes	NA
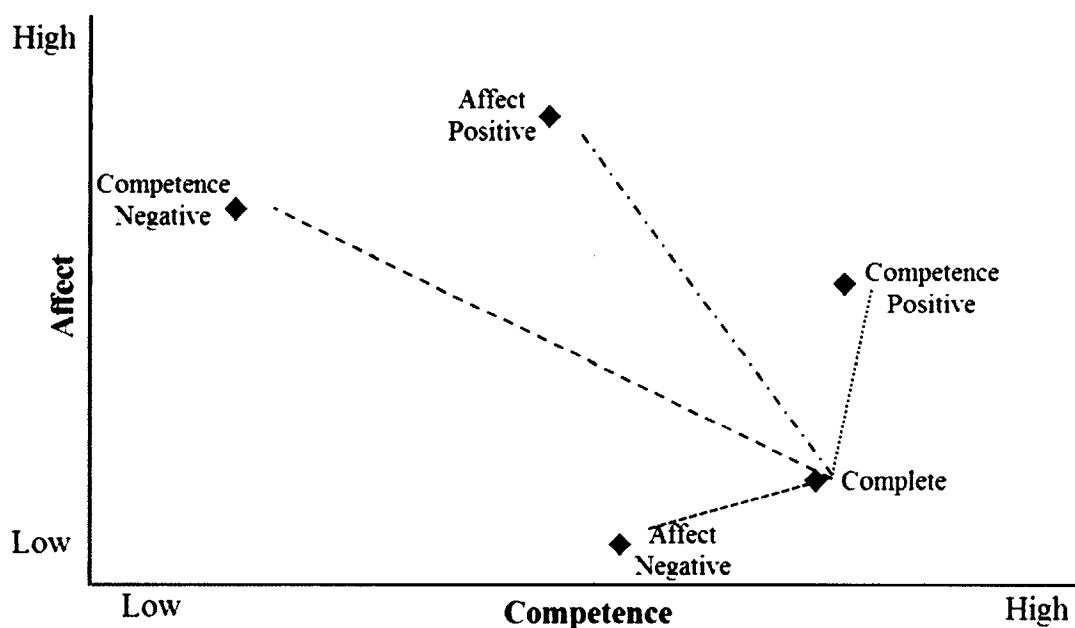
Figure 4.3 *Innuendo Study Lawyer Condition*

Hair Stylist

A third group of subjects evaluated a complete stereotype consistent description (negative information provided on the competence dimension and positive information provided on the affect dimension), or one of four incomplete descriptions containing either competence information only or affect information only. The stereotypically consistent complete condition places the hair stylist in quadrant IV. Hypothesis one is

tested using the negative (low) competence only condition and the positive (high) affect only condition. Hypothesis two is tested using the positive (high) competence only condition and the negative (low) affect only condition.

In the complete condition subjects report a mean competence score of -.53 and a mean affect score of .75. Independent samples t-tests are used to examine the differences between the complete condition and each of the four incomplete hair stylist conditions.

The difference between the complete condition (-.53) and the competence positive condition (.62) is significant in the competence dimension $t(37) = -5.9$, $p < .001$. The difference between the complete condition (.75) and the competence positive condition (.03) is significant in the affect dimension $t(37) = 4.2$, $p < .001$. Placement of the hair stylist in the positive (high) competence only condition moves from quadrant IV to quadrant I. Hypothesis two is supported because subjects' ratings of the hair stylist on the competence dimension are significantly higher in the competence positive only condition than in the complete condition.

The difference between the complete condition (-.53) and the competence negative condition (-.24) is not significant in the competence dimension $t(37) = -1.2$, $p = .227$. The difference between the complete condition (.75) and the competence negative condition (.18) is significant in the affect dimension $t(37) = 2.9$, $p < .01$. Placement of the hair stylist in the negative (low) competence only condition resides in quadrant IV, the same quadrant as the complete condition. Hypothesis one is not supported because subjects' ratings of the hair stylist on the competence dimension are not significantly lower in the competence negative only condition than in the complete condition.

The difference between the complete condition (-.53) and the affect positive condition (-.41) is not significant in the competence dimension t(39) = -.51, p = .613. The difference between the complete condition (.75) and the affect positive condition (.88) is not significant in the affect dimension t(39) = -1.1, p = .299. Placement of the hair stylist in the positive (high) affect only condition resides in quadrant IV, the same quadrant as the complete condition. Hypothesis one is not supported because subjects' ratings of the hair stylist on the affect dimension are not significantly higher in the affect positive only condition than in the complete condition.

The difference between the complete condition (-.53) and the affect negative condition (.36) is significant in the competence dimension t(40) = -4.7, p < .001. The difference between the complete condition (.75) and the affect negative condition (-.08) is significant in the affect dimension t(40) = 4.9, p < .001. Placement of the hair stylist in the negative (low) affect only condition moves from quadrant IV to quadrant II. Hypothesis two is supported because subjects' ratings of the hair stylist on the affect dimension are significantly lower in the affect negative only condition than in the complete condition.

Table 4.14 displays H_1 and H_2 for the hair stylist and Figure 4.4 displays the movement within and between quadrants of the SPPF for each incomplete condition relative to the complete condition for the hair stylist.

Table 4.14

Innuendo Study Hair Stylist H_1 and H_2

Condition	Hypothesis 1 Supported	Hypothesis 2 Supported
Competence Positive	NA	Yes
Competence Negative	No	NA
Affect Positive	No	NA
Affect Negative	NA	Yes
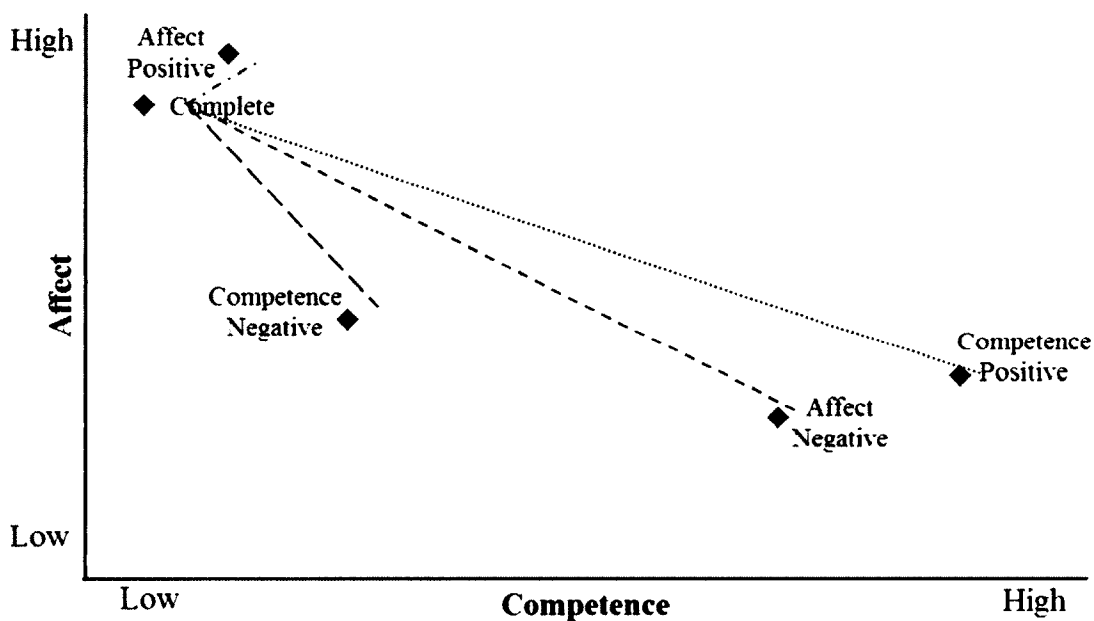
Figure 4.4 *Innuendo Study Hair Stylist Condition*

Nail Technician

A fourth group of subjects evaluated a complete stereotype consistent description (negative information provided on both the competence and affect dimensions), or one of four incomplete descriptions containing either competence information only or affect information only. The stereotypically consistent complete condition places the nail technician in quadrant III. Hypothesis one is tested using the negative (low) competence only condition and the negative (low) affect only condition. Hypothesis two is tested

using the positive (high) competence only condition and the positive (high) affect only condition.

In the complete condition subjects report a mean competence score of -.28 and a mean affect score of -1.2. Independent samples t-tests are used to examine the differences between the complete condition and each of the four incomplete nail technician conditions.

The difference between the complete condition (-.28) and the competence positive condition (.68) is significant in the competence dimension $t(34) = -4.6$, $p < .001$. The difference between the complete condition (-1.2) and the competence positive condition (.38) is significant in the affect dimension $t(34) = -8.4$, $p < .001$. Placement of the nail technician in the positive (high) competence only condition moves from quadrant III to quadrant I. Hypothesis two is supported because subjects' ratings of the nail technician on the competence dimension are significantly higher in the competence positive only condition than in the complete condition.

The difference between the complete condition (-.28) and the competence negative condition (.06) is not significant in the competence dimension $t(36) = -1.4$, $p = .172$. The difference between the complete condition (-1.2) and the competence negative condition (.53) is significant in the affect dimension $t(36) = 9.7$, $p < .001$. Placement of the nail technician in the negative (low) competence only condition moves from quadrant III to quadrant I. Hypothesis one is not supported because subjects' ratings of the nail technician on the competence dimension are not significantly lower in the competence negative only condition than in the complete condition.

The difference between the complete condition (-.28) and the affect positive condition (-.18) is not significant in the competence dimension $t(38) = -.37$, $p = .716$. The difference between the complete condition (-1.2) and the affect positive condition (.91) is significant in the affect dimension $t(38) = -12.0$, $p < .001$. Placement of the nail technician in the positive (high) affect only condition moves from quadrant III to quadrant IV. Hypothesis two is supported because subjects' ratings of the nail technician on the affect dimension are significantly higher in the affect positive only condition than in the complete condition.

The difference between the complete condition (-.28) and the affect negative condition (-.43) is not significant in the competence dimension $t(35) = .52$, $p = .608$. The difference between the complete condition (-1.2) and the affect negative condition (-1.1) is not significant in the affect dimension $t(35) = -.18$, $p = .859$. Placement of the nail technician in the negative (low) affect only condition resides in quadrant III, the same quadrant as the complete condition. Hypothesis one is not supported because subjects' ratings of the nail technician on the affect dimension are not significantly lower in the affect negative only condition than in the complete condition.

Table 4.15 displays H_1 and H_2 for the nail technician and Figure 4.5 displays the movement within and between quadrants of the SPPF for each incomplete condition relative to the complete condition for the nail technician.

Table 4.15

Innuendo Study Nail Technician H₁ and H₂

Condition	Hypothesis 1 Supported	Hypothesis 2 Supported
Competence Positive	NA	Yes
Competence Negative	No	NA
Affect Positive	NA	Yes
Affect Negative	No	NA
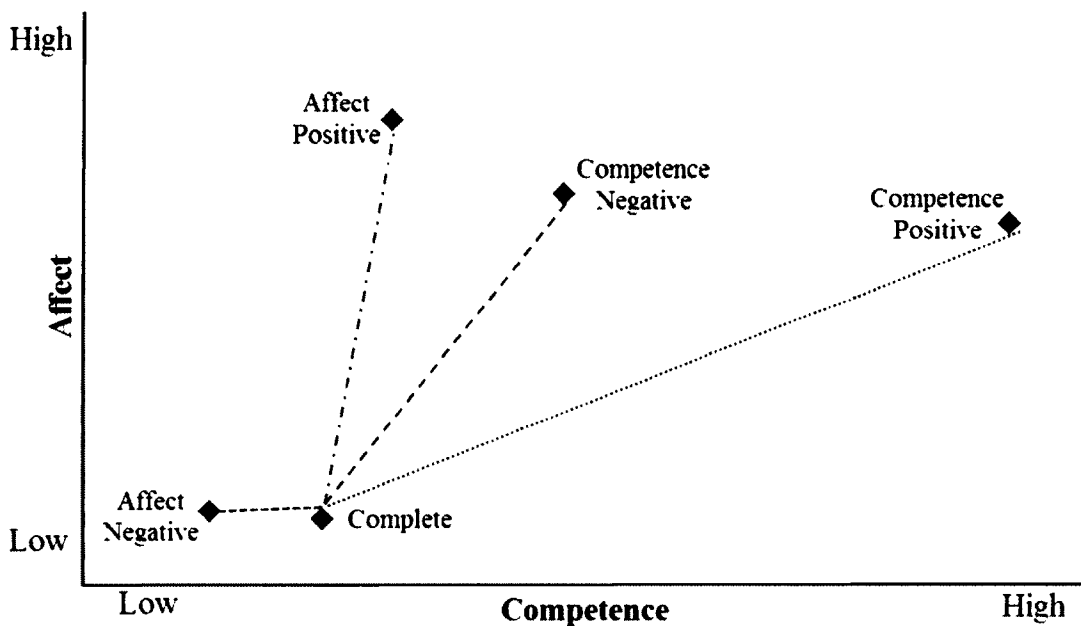
Figure 4.5 *Innuendo Study Nail Technician Condition*

Part Two Overall Conclusion

Movement within and between quadrants of the SPPF can be explained by subject evaluations of each of the four service provider types. Hypothesis one is supported for each incomplete condition for the doctor and for the affect negative condition for the lawyer. When subjects are provided stereotypically consistent information on only one dimension of the SPPF, the result is a significant shift on the provided dimension in the direction of the consistency. Hypothesis two is supported for each incomplete condition

of all four service providers. Thus, when subjects are provided stereotypically inconsistent information on only one dimension of the SPPF, the result is a significant shift on the provided dimension in the direction of the inconsistency. Table 4.16 provides findings for the tested hypotheses across all four service providers.

Table 4.16

Innuendo Study All Conditions H_1 and H_2

		Competence Positive	Competence Negative	Affect Positive	Affect Negative
H_1	Doctor	Yes	NA	Yes	NA
	Lawyer	No	NA	NA	Yes
	Hair Stylist	NA	No	No	NA
	Nail Technician	NA	No	NA	No
H_2	Doctor	NA	Yes	NA	Yes
	Lawyer	NA	Yes	Yes	NA
	Hair Stylist	Yes	NA	NA	Yes
	Nail Technician	Yes	NA	Yes	NA

Part Three: The Innuendo Effect

Part three centers on Research Question 3. Research Question 3 addresses the applicability of the innuendo effect on consumers' perceptions of service providers. Hypothesis three states that a subject exposed to stereotypically consistent information on the competence dimension only will rate a high affect service provider (located in quadrant I or quadrant IV for the complete condition) significantly lower in affect relative to the complete condition. Hypothesis four states that a subject exposed to stereotypically consistent information on the competence dimension only will rate a low affect service provider (located in quadrant II or quadrant III for the complete condition) significantly higher in affect relative to the complete condition. Hypothesis five states that a subject exposed to stereotypically consistent information on the affect dimension

only will rate a high competence service provider (located in quadrant I or quadrant II for the complete condition) significantly lower in competence relative to the complete condition. Hypothesis six states that a subject exposed to stereotypically consistent information on the affect dimension only will rate a low competence service provider (located in quadrant III or quadrant IV for the complete condition) significantly higher in competence relative to the complete condition.

The innuendo effect is evaluated using the same procedures as study one in Kervyn et al. (2012). The innuendo effect is assessed through the use of four dependent measures: absolute competence, absolute affect, relative competence, and relative likeability. The term 'absolute' with respect to absolute competence and absolute affect is borrowed from Kervyn et al. (2012). The term 'absolute' does not mean that these are the only traits possible to measure competence or affect, but that they are the measured traits that formed the factors for competence and affect, respectively.

Absolute competence and absolute affect are formed using the mean scores for each component from the previously conducted factor analysis. For each of the measured trait items, subjects were asked to rate the extent to which the trait item fit with the service provider on a scale from one (does not fit at all) to seven (fits extremely well). Relative competence and relative likeability are assessed on a sliding scale asking subjects to rate the extent to which they consider this service provider to be more or less capable/likeable than other service providers in the same profession. The slider scale ranges from zero (less capable / less likeable) to 100 (more capable / more likeable).

Each dependent measure (absolute competence, absolute warmth, relative likeability, and relative capability) was submitted to a 2 SPPF dimension information

(competence-related only vs. affect-related only) x 2 SPPF dimension valence (positive (high) scoring terms on a dimension vs. negative (low) scoring items on a dimension) plus control analysis of variance (ANOVA) with both factors varying between subjects. Independent samples t-tests are then used to examine the mean differences between the complete condition and each of the four incomplete conditions on each dependent measure.

Doctor

Subjects' ratings on each of the dependent measures of how they perceive the doctor depends on the experimental condition to which they are exposed. To see an innuendo effect for the doctor, subjects will need to rate the doctor significantly lower in absolute affect or relative likeability compared to the complete condition when exposed to positive (high) competence information only (H3). Alternatively, subjects will need to rate the doctor significantly lower in absolute competence or relative capability compared to the complete condition when exposed to positive (high) affect information only (H5). Significant differences emerge for the doctor on the following measures: absolute competence: $F_{(df = 4, 101)} = 31.3$, $p < .001$; absolute affect: $F_{(df = 4, 101)} = 97.8$, $p < .001$; relative capability: $F_{(df = 4, 101)} = 22.24$, $p < .001$; and relative likeability: $F_{(df = 4, 101)} = 63.66$, $p < .001$.

The difference between the complete condition (5.9) and the competence positive condition (6.4) is significant for absolute competence $t(41) = -1.9$, $p < .1$. The difference between the complete condition (6.1) and the competence positive condition (5.1) is significant for absolute affect $t(41) = 3.4$, $p < .01$. The difference between the complete condition (79.5) and the competence positive condition (81.9) is not significant for

relative capability t(41) = -.57, p = .569. The difference between the complete condition (83.5) and the competence positive condition (64.4) is significant for relative likeability t(41) = 3.5, p < .01. Hypothesis three is supported with both absolute affect and relative likeability. Subjects rate the doctor significantly lower in both absolute affect and relative likeability compared to the complete condition when provided positive (high) competence information only.

The difference between the complete condition (5.9) and the affect positive condition (5.6) is not significant for absolute competence t(42) = 1.1, p = .295. The difference between the complete condition (6.1) and the affect positive condition (6.6) is significant for absolute affect t(42) = -2.52, p < .05. The difference between the complete condition (79.5) and the affect positive condition (72.7) is not significant for relative capability t(42) = 1.3, p = .195. The difference between the complete condition (83.5) and the affect positive condition (88.3) is not significant for relative likeability t(42) = -1.1, p = .281. Hypothesis five is not supported by absolute competence or relative capability. Subjects did not rate the doctor significantly lower in absolute competence or relative capability compared to the complete condition when provided positive (high) affect information only.

The innuendo effect is seen with significantly lower scores on the absolute affect and relative likeability measures when subjects are provided positive (high) information only on the competence dimension. In the positive (high) competence only condition subjects are presented with stereotype consistent information on the competence dimension, and rate the doctor significantly lower (stereotype inconsistent) compared to the complete condition in terms of absolute affect and relative likeability though no

information is provided to subjects regarding the doctors affect or likeability. No innuendo effect is seen in the absolute competence and relative capability measures when subjects are provided positive (high) information only on the affect dimension. Table 4.17 provides the means for each dependent measure and findings for each hypothesis.

Table 4.17

Innuendo Study Doctor H$_{3-6}$

Doctor	Absolute Competence	Absolute Affect	Relative Capability	Relative Likeability
Complete	5.9	6.1	79.5	83.5
Competence Positive	6.4	5.1	81.9	64.4
Competence Negative	4.7	5.0	53.6	61.1
Affect Positive	5.6	6.6	72.7	88.3
Affect Negative	2.8	1.7	34.5	16.3
Hypothesis 3	**NA**	Yes	**NA**	Yes
Hypothesis 5	No	**NA**	No	**NA**

Lawyer

Subjects' ratings on each of the dependent measures of how they perceive the lawyer depends on the experimental condition to which they are exposed. To see an innuendo effect for the lawyer, subjects will need to rate the lawyer significantly higher in absolute affect or relative likeability compared to the complete condition when exposed to positive (high) competence information only (H4). Alternatively, subjects will need to rate the lawyer significantly lower in absolute competence or relative capability compared to the complete condition when exposed to negative (low) affect information only (H5). Significant differences emerge for the lawyer on the following measures: absolute competence: $F_{(df=4, 103)} = 11.6$, $p < .001$; absolute affect: $F_{(df=4, 103)} = 83.29$, $p <$

.001; relative capability: $F_{(df=4, 103)} = 8.92$, $p < .001$; and relative likeability: $F_{(df=4, 103)} = 35.39$, $p < .001$.

The difference between the complete condition (5.5) and the competence positive condition (6.0) is significant for absolute competence $t(43) = -2.2$, $p < .05$. The difference between the complete condition (2.5) and the competence positive condition (4.6) is significant for absolute affect $t(43) = -7.2$, $p < .001$. The difference between the complete condition (71.3) and the competence positive condition (74.4) is not significant for relative capability $t(43) = -.59$, $p = .557$. The difference between the complete condition (37) and the competence positive condition (61.4) is significant for relative likeability $t(43) = -4.1$, $p < .001$. Hypothesis four is supported with both absolute affect and relative likeability. Subjects rate the lawyer significantly higher in both absolute affect and relative likeability compared to the complete condition when provided positive (high) competence information only.

The difference between the complete condition (5.5) and the affect negative condition (4.5) is significant for absolute competence $t(44) = 2.5$, $p < .05$. The difference between the complete condition (2.5) and the affect negative condition (1.6) is significant for absolute affect $t(44) = 4.0$, $p < .001$. The difference between the complete condition (71.3) and the affect negative condition (54.2) is significant for relative capability $t(44) = 2.6$, $p < .05$. The difference between the complete condition (37.0) and the affect negative condition (15.0) is significant for relative likeability $t(44) = 4.6$, $p < .001$. Hypothesis five is supported with both absolute competence and relative capability. Subjects rate the lawyer significantly lower in absolute competence and relative

capability compared to the complete condition when provided negative (low) affect information only.

The innuendo effect is seen with significantly higher scores on the absolute affect and relative likeability measures when subjects are provided positive (high) information only on the competence dimension. In the positive (high) competence only condition subjects are presented with stereotype consistent information on the competence dimension, and rate the lawyer significantly higher (stereotype inconsistent) compared to the complete condition in terms of absolute affect and relative likeability though no information is provided to subjects regarding the lawyers affect or likeability. The innuendo effect is also seen with significantly lower scores on the absolute competence and relative capability measures when subjects are provided negative (low) information only on the affect dimension. In the negative (low) affect only condition subjects are presented with stereotype consistent information on the affect dimension, and rate the lawyer significantly lower (stereotype inconsistent) compared to the complete condition in terms of absolute competence and relative capability though no information is provided to subjects regarding the lawyers competence or capability. Table 4.18 provides the means for each dependent measure and findings for each hypothesis.

Table 4.18

Innuendo Study Lawyer H_{3-6}

Lawyer	Absolute Competence	Absolute Affect	Relative Capability	Relative Likeability
Complete	5.5	2.5	71.3	37.0
Competence Positive	6.0	4.6	74.4	61.4
Competence Negative	3.7	4.6	42.9	60.5
Affect Positive	5.2	6.0	66.1	78.6
Affect Negative	4.5	1.6	54.2	15.0
Hypothesis 4	NA	Yes	NA	Yes
Hypothesis 5	Yes	NA	Yes	NA

Hair Stylist

Subjects' ratings on each of the dependent measures of how they perceive the hair stylist depends on the experimental condition to which they are exposed. To see an innuendo effect for the hair stylist, subjects will need to rate the hair stylist significantly lower in absolute affect or relative likeability compared to the complete condition when exposed to negative (low) competence information only (H3). Alternatively, subjects will need to rate the hair stylist significantly higher in absolute competence or relative capability compared to the complete condition when exposed to positive (high) affect information only (H6). Significant differences emerge for the hair stylist on the following measures: absolute competence: $F_{(df = 4, 99)} = 8.2$, $p < .001$; absolute affect: $F_{(df = 4, 99)} = 7.5$ $p < .001$; relative capability: $F_{(df = 4, 99)} = 11.0$, $p < .001$; and relative likeability: $F_{(df = 4, 99)} = 7.8$, $p < .001$.

The difference between the complete condition (4.6) and the competence negative condition (4.8) is not significant for absolute competence $t(37) = -.67$, $p = .535$. The difference between the complete condition (5.6) and the competence negative condition (4.8) is significant for absolute affect $t(37) = 2.6$, $p < .05$. The difference between the

complete condition (52.1) and the competence negative condition (50.7) is not significant for relative capability $t(37) = -.288$, $p = .775$. The difference between the complete condition (68.5) and the competence negative condition (49.8) is significant for relative likeability $t(37) = 3.2$, $p < .01$. Hypothesis three is supported with both absolute affect and relative likeability. Subjects rate the hair stylist significantly lower in both absolute affect and relative likeability compared to the complete condition when provided negative (low) competence information only.

The difference between the complete condition (4.6) and the affect positive condition (4.8) is not significant for absolute competence $t(39) = -.72$, $p = .475$. The difference between the complete condition (5.6) and the affect positive condition (5.9) is not significant for absolute affect $t(39) = -1.3$, $p = .194$. The difference between the complete condition (52.1) and the affect positive condition (57.5) is not significant for relative capability $t(39) = -1.2$, $p = .251$. The difference between the complete condition (68.5) and the affect positive condition (80.7) is significant for relative likeability $t(39) = -2.1$, $p < .05$. Hypothesis six is not supported with absolute competence or relative capability. Subjects do not rate the hair stylist significantly higher in absolute competence or relative capability compared to the complete condition when provided positive (high) affect information only.

The innuendo effect is seen with significantly lower scores on the absolute affect and relative likeability measures when subjects are provided negative (low) information only on the competence dimension. In the negative (low) competence only condition subjects are presented with stereotype consistent information on the competence dimension, and rate the hair stylist significantly lower (stereotype inconsistent) compared

to the complete condition in terms of absolute affect and relative likeability though no information is provided to subjects regarding the hair stylists affect or likeability. No innuendo effect is seen in the absolute competence or relative capability measures when subjects are provided positive information only on the affect dimension. Table 4.19 provides the means for each dependent measure and findings for each hypothesis.

Table 4.19

Innuendo Study Hair Stylist H_{3-6}

Hair Stylist	Absolute Competence	Absolute Affect	Relative Capability	Relative Likeability
Complete	4.6	5.6	52.1	68.5
Competence Positive	5.9	4.9	72.3	60.2
Competence Negative	4.8	4.8	50.7	49.8
Affect Positive	4.8	5.9	57.5	80.7
Affect Negative	5.5	4.6	74.4	61.5
Hypothesis 3	**NA**	**Yes**	**NA**	**Yes**
Hypothesis 5	**No**	**NA**	**No**	**NA**

Nail Technician

Subjects' ratings on each of the dependent measures of how they perceive the nail technician depends on the experimental condition to which they are exposed. To see an innuendo effect for the nail technician, subjects will need to rate the nail technician significantly higher in absolute affect or relative likeability compared to the complete condition when exposed to negative (low) competence information only (H4). Alternatively, subjects will need to rate the nail technician significantly higher in absolute competence or relative capability compared to the complete condition when exposed to negative (low) affect information only (H6). Significant differences emerge for the nail technician on the following measures: absolute competence: $F_{(df = 4, 92)} = 8.5$, $p < .001$;

absolute affect: $F_{(df=4, 92)}$ = 57.2, p < .001; relative capability: $F_{(df=4, 92)}$ = 7.3, p < .001; and relative likeability: $F_{(df=4, 92)}$ = 31.91, p < .001.

The difference between the complete condition (4.2) and the competence negative condition (5.3) is significant for absolute competence t(36) = -3.1, p < .01. The difference between the complete condition (2.5) and the competence negative condition (5.6) is significant for absolute affect t(36) = -8.9, p < .001. The difference between the complete condition (47) and the competence negative condition (65.2) is significant for relative capability t(36) = -2.8, p < .01. The difference between the complete condition (24.7) and the competence negative condition (66) is significant for relative likeability t(36) = -6.4, p < .001. Hypothesis four is supported with both absolute affect and relative likeability. Subjects rate the nail technician significantly higher in both absolute affect and relative likeability compared to the complete condition when provided negative (low) competence information only.

The difference between the complete condition (4.2) and the affect negative condition (4.1) is not significant for absolute competence t(35) = .396, p = .695. The difference between the complete condition (2.5) and the affect negative condition (2.4) is not significant for absolute affect t(35) = .088, p = .930. The difference between the complete condition (47) and the affect negative condition (49.3) is not significant for relative capability t(35) = -.31, p = .759. The difference between the complete condition (24.7) and the affect negative condition (27.2) is not significant for relative likeability t(35) = -.33, p = .741. Hypothesis six is not supported for absolute competence or relative capability. Subjects do not rate the nail technician significantly higher in

absolute competence or relative capability compared to the complete condition when provided negative (low) affect information only.

The innuendo effect is seen in the absolute affect and relative likeability measures when subjects are provided negative (low) information only on the competence dimension. In the negative (low) competence only condition subjects are presented with stereotype consistent information on the competence dimension , and rate the nail technician significantly higher (stereotype inconsistent) compared to the complete condition in terms of absolute affect and relative likeability, though no information is provided to subjects regarding the nail technicians affect or likeability. No innuendo effect is seen in the absolute competence and relative capability measures when subjects are provided negative (low) information only on the affect dimension. Table 4.20 provides the means for each dependent measure and findings for each hypothesis.

Table 4.20

Innuendo Study Nail Technician H$_{3-6}$

Nail Technician	Absolute Competence	Absolute Affect	Relative Capability	Relative Likeability
Complete	4.2	2.5	47.0	24.7
Competence Positive	6.1	5.6	78.9	68.9
Competence Negative	5.3	5.6	65.2	66.0
Affect Positive	5.1	6.1	68.4	81.5
Affect Negative	4.1	2.4	49.3	27.2
Hypothesis 4	NA	Yes	NA	Yes
Hypothesis 6	No	NA	No	NA

Part Three Overall Conclusion

After assessing significant findings across the four dependent variables, subject's ratings of absolute competence and absolute affect parallel those of relative capability

and relative likeability for each of the four service providers. The innuendo effect occurs when subjects provide a stereotype inconsistent rating on the omitted dimension after receiving stereotype consistent information on the provided dimension. Thus, an innuendo effect occurs when subjects are provided stereotype consistent information on the competence dimension and provide stereotype inconsistent information on the affect dimension or when subjects are provided stereotype consistent information on the affect dimension and provide stereotype inconsistent information on the competence dimension.

The innuendo effect occurs for the absolute affect and relative likeability measures when subjects are provided stereotype consistent information on the competence dimension in each of the four service provider types. In the doctor and lawyer scenarios subjects are provided positive information on the competence dimension (stereotype consistent) yet rate the doctor significantly lower (stereotype inconsistent) and rate the lawyer significantly higher (stereotype inconsistent) on absolute affect and relative likeability compared to the complete condition. In the hair stylist and nail technician scenarios subjects are provided negative information on the competence dimension (stereotype consistent) yet rate the hair stylist significantly lower (stereotype inconsistent) and rate the nail technician significantly higher (stereotype inconsistent) on absolute affect and relative likeability compared to the complete condition.

The innuendo effect occurs for the absolute competence and relative capability measures when subjects are given stereotype consistent information on the affect dimension in the lawyer scenario. In the lawyer scenario subjects are provided negative information on the affect dimension (stereotype consistent) yet rate the lawyer significantly lower (stereotype inconsistent) on absolute competence and relative

capability compared to the complete condition. No innuendo effect is found when subjects are provided stereotype consistent information on the affect dimension in the doctor, hair stylist, or nail technician scenarios. Table 4.21 provides findings for the tested hypotheses across all four service providers.

Table 4.21

Innuendo Study All Service Providers H_{3-6}

		Absolute Competence	Absolute Affect	Relative Capability	Relative Likeability
H_3	Doctor	NA	Yes	NA	Yes
	Hair Stylist	NA	Yes	NA	Yes
H_4	Lawyer	NA	Yes	NA	Yes
	Nail Technician	NA	Yes	NA	Yes
H_5	Doctor	No	NA	No	NA
	Lawyer	Yes	NA	Yes	NA
H_6	Hair Stylist	No	NA	No	NA
	Nail Technician	No	NA	No	NA

Main Study Design

As described in Chapter 3, the main study uses written descriptions of four pre-selected service provider types (Doctor, Lawyer, Hair Stylist, and Nail Technician). Subjects react to a service experience based on the match between a service provider description and the given type. The study is comprised of a 2 x 2 x 2 x 3 between subjects design. The experimental factors involved in the study include SPPF dimension information provided (competence-related only vs. affect-related only), relative dimension valence (positive (high valence) scoring terms on a dimension vs. negative (low valence) scoring terms on a dimension), stereotype consistency (consistent with the prototype vs. inconsistent with the prototype), and service outcome (excellent vs. average vs. below average). In each cell of the 2 x 2 x 2 x 3 matrix subjects are presented with a short scenario.

Dimension information and dimension valence scenarios remain the same as from the Innuendo Study. In the stereotype consistent condition the doctor is described with the following information:

"You notice that the doctor is physically fit, is well groomed, is professionally dressed, wears a white lab coat, and has a stethoscope around his/her neck."

In the stereotype inconsistent condition the doctor is described with the following information:

"You notice that the doctor is slightly overweight, needs to shave, has on a faded shirt, wears sandals, and has a stethoscope in his back pocket".

Service outcome is manipulated to provide the image that the service provider provided either excellent, average, or below average service. A series of small studies provide

input into the scenario. Attributes used in the doctor scenario include wait time, familiarity with your chart, questions asked by the doctor, amount of time the doctor spent with you, and options for alleviating your symptoms. Four separate studies following this implementation are designed to capture each of the four service provider quadrants within the SPPF, the stereotype associated with the service provider, and three service outcomes.

Methodology

Four separate experiments (or sub-studies), one representing reactions to the experimental manipulations for each SPPF service provider type studied, provide data for the analyses reported in this section. Qualtrics online survey platform was used to design and implement each of the four surveys. Amazon's Mechanical Turk was used to gather data for the doctor, lawyer, and hair stylist survey and students at Louisiana Tech University were used to gather data for the nail technician study. Criteria for eligibility to complete the survey included individuals residing in the southeastern United States (defined as the following states: Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas). The sampling frame is restricted to the southeastern United States to help maintain a consistent stereotype for each service provider. One additional requirement for the main study involving the hair stylist and the nail technician is that subjects must be female. This is done to maintain relevance.

Data collection took place during the winter 2014 academic quarter. Potential subjects opted-in to take part in a survey that dealt with consumers' opinions about service providers. A service provider was defined as an individual that provides service to other entities. Basic descriptive statistics for each of the four experiments follow,

directly followed by detailed results displaying the manipulation checks, and hypotheses tests.

Descriptive Statistics: Main Study

Doctor

The sample for the doctor condition contains a total of 181 subjects. Female subjects comprise 64 percent of the sample. The median age of subjects is 35 years of age with the youngest subject at 18 years of age and the oldest subject at 74 years of age. Fifty-two percent of the sample has completed a four-year college degree or higher.

Lawyer

The sample for the lawyer condition contains a total of 195 subjects. Female subjects comprise 41 percent of the sample. The median age of subjects is 34 years of age with the youngest subject at 18 years of age and the oldest subject at 78 years of age. Forty-three percent of the sample has completed a four-year college degree or higher.

Hair Stylist

The sample for the hair stylist condition contains a total of 185 subjects. Female subjects comprise 100 percent of the sample. The median age of subjects is 29.5 years of age with the youngest subject at 18 years of age and the oldest subject at 68 years of age. Forty-one percent of the sample has completed a four-year college degree or higher.

Nail Technician

The sample for the nail technician condition contains a total of 154 subjects. Female subjects comprise 100 percent of the sample. The median age of subjects is 21 years of age with the youngest subject at 17 years of age and the oldest subject at 30

years of age. One hundred percent of the sample is currently working towards a four-year college degree.

Table 4.22 presents the demographics for subjects in the doctor, lawyer, hair stylist, and nail technician conditions. The demographics of each service provider condition are representative of the respective clientele, thus manipulation checks follow.

Table 4.22

Main Study Descriptive Statistics

	Doctor	Lawyer	Hair Stylist	Nail Technician
Gender				
Male	65	79	0	0
Female	116	114	185	154
Missing	0	2	0	0
Age				
30 or Under	64	70	95	153
31 - 40	53	54	46	0
41 - 50	32	33	19	0
51 - 60	20	28	15	0
61 or Over	12	8	7	0
Missing	0	2	3	1
Education				
Less than High School	0	3	0	0
High School / GED	13	19	23	0
Some College	48	60	63	154
2-year College Degree	26	28	24	0
4-year College Degree	61	51	50	0
Masters Degree	28	28	19	0
Doctoral Degree	1	1	1	0
Professional Degree	4	3	5	0
Ethnicity				
White	152	156	141	150
Hispanic or Latino	7	6	4	1
Black or African American	13	23	30	1
Native American / American Indian	2	2	3	1
Asian / Pacific Islander	1	3	7	0
Other	6	3	0	1
Missing	0	2	0	0

Main Study: Manipulations

To test whether the dimension information, dimension valence, stereotype

consistency, and service outcome are successfully manipulated, manipulation checks are

performed based on subjects' responses. One manipulation check is performed for the

dimension information, dimension valence, and service outcome manipulation and two manipulation checks are performed for the stereotype consistency manipulation. This section examines the validity of each of the four manipulations.

The manipulation check for dimension information involves a multiple choice question where the subject is prompted with the following information: "According to the scenario, the colleague described the service provider with terms addressing:" and the subject selects one of the following choices: competence, affect, or both (competence and affect).

The manipulation check for dimension valence (relatively positive or negative) involves a multiple choice question where the subject is prompted with the following information: "According to the scenario, the colleague described the service provider with terms that were:" and the subject selects one of the following choices: positive, negative, both (positive and negative), or neither (positive nor negative).

The first manipulation check for stereotype consistency involves a multiple choice question where the subject is prompted with the following information: "According to the scenario, when you arrived at the service provider's location for your appointment, the service provider's appearance was:" and the subject selects one of the following choices: consistent with the stereotype I hold for the service provider or inconsistent with the stereotype I hold for the service provider. The second manipulation check for stereotype consistency assesses perceived service provider typicalness by summing four Likert-type items forming a typicality index (Babin, Boles, and Darden1995). Subjects responded to the following four questions ranging from 1=Strongly Disagree to 7=Strongly Agree.

1) This service provider is typical of service providers.

2) This service provider's appearance is appropriate for a service provider.

3) This service provider matches my idea of what a service provider is.

4) This service provider could only be described as an unusual service

provider. (r)

The coefficient alpha (α) for the typicalness scale is .80 (N=715). Scale statistics show a summed scale mean equal to 15.96 with a standard deviation equal to 5.9. This equates to a grand mean for an averaged scale equal to 3.99 out of a seven-point scale, with a minimum single-item mean of 3.6 and a maximum-single item mean of 4.4. Principal component analysis results indicate that a single-factor solution contains 62.7 percent of variance explained. Thus, the typicalness scale is acceptable for further analyses.

The manipulation check for service outcome involves a multiple choice question where the subject is prompted with the following information: "When you think back on your appointment, what level of service was provided by the service provider?" and the subject selects one of the following choices: excellent, average, or below average.

Manipulation Check Results

The manipulation check for each experimental condition involves a cross-classification of the subjects' responses to the manipulation check items within each experimental condition. The rows in the cross-classification are made up of the dimension information, dimension valence, stereotype consistency, or service outcome. The columns consist of the responses to the experimental condition manipulation. A chi-square test examines whether responses vary by condition. The second manipulation

check for stereotype consistency involves a one-way analysis of variance (ANOVA) to analyze the differences between group means.

Doctor

In the doctor condition, each manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 2 df) = 88.8 (p < .001); (χ^2 (dimension valence 3 df) = 76.6 (p < .001); (χ^2 (stereotype consistency 1 df) = 57.6 (p < .001); and (χ^2 (service outcome 4 df) = 140.8 (p < .001).

Analysis of the dimension information manipulation reveals that 55 of the 79 subjects in the competence only condition correctly classified the scenario as containing competence information only, while 21 of the 79 subjects in the competence only condition classified the scenario as containing both competence and affect information. Additionally, 61 of the 102 subjects in the affect only condition correctly classified the scenario as containing affect information only, while 33 of the 102 subjects in the affect only condition classified the scenario as containing both competence and affect information. Only three subjects expressed the contrasting belief when provided competence dimension information and eight subjects expressed the contrasting belief when provided affect dimension information.

Analysis of the dimension valence manipulation reveals that 81 of the 87 subjects in the positive only condition correctly classified the scenario as containing positive information only, while three of the 87 subjects in the positive only condition classified the scenario as both positive and negative information and one of the 87 subjects in the positive only condition classified the scenario as neither positive nor negative information. Additionally, 42 of the 94 subjects in the negative only condition correctly

classified the scenario as containing negative information only, while 14 of the 94 subjects in the negative only condition classified the scenario as both positive and negative information and 10 of the 94 subjects in the negative only condition classified the scenario as neither positive nor negative information. Only two subjects expressed the contrasting belief when provided positive dimension information, however, 28 subjects expressed the contrasting belief when provided negative dimension information.

Upon further examination, 26 of the 28 subjects that expressed the contrasting belief were shown the competence negative condition, and two of the 28 subjects that expressed the contrasting belief were shown the affect negative condition. In the competence negative dimension the doctor is described with the following "this doctor attended a regional medical school, is associated with a local clinic, and refers to webmd.com." Subjects may view each of these qualities as not overtly negative by themselves, and thus conclude them to be more positive than negative, selecting the positive valence rather than the negative valence.

Analysis of the stereotype consistency manipulation reveals that 67 of the 93 subjects in the stereotype consistent condition correctly classified the scenario as containing stereotype consistent information. Additionally, 74 of the 88 subjects in the stereotype inconsistent condition correctly classified the scenario as containing stereotype inconsistent information. Twenty-six subjects expressed the contrasting belief when provided stereotype consistent information and 14 subjects expressed the contrasting belief when provided stereotype inconsistent information.

Subjects in the stereotype consistent condition were provided the following description of the doctor, "you notice that the doctor is physically fit, is well groomed, is

professionally dressed, wears a white lab coat, and has a stethoscope around their neck." One possibility for the high number of subjects expressing the contrasting belief when provided stereotype consistent information is that the doctor they see on a regular basis does not fit the description provided. Subjects may refer back to their doctor (exemplar) rather than all doctors in general (prototype) to base their opinions.

The second analysis of the stereotype consistency uses a one-way ANOVA which shows that subjects' typicalness perceptions varied between stereotype consistent and stereotype inconsistent (F $_{(df = 1, 179)}$ = 83.96, p < .001). Subjects in the stereotype consistent condition report a mean typicalness score of 4.4 and subjects in the stereotype inconsistent condition report a mean typicalness score of 3.3.

Analysis of the service outcome manipulation reveals that 49 of the 60 subjects in the excellent service outcome condition correctly classified the scenario as an excellent service outcome, while 10 of the 60 subjects in the excellent service outcome condition classified the scenario as an average service outcome and one of the 60 subjects in the excellent service outcome condition classified the scenario as a below average service outcome. Additionally, 33 of the 58 subjects in the average service outcome condition correctly classified the scenario as an average service outcome, while four of the 58 subjects in the average service outcome condition classified the scenario as an excellent service outcome and 21 of the 58 subjects in the average service outcome condition classified the scenario as a below average service outcome. Lastly, 48 of the 63 subjects in the below average service outcome condition correctly classified the scenario as a below average service outcome, while two of the 63 subjects in the below average service outcome condition classified the scenario as an excellent service outcome and 13 of the

63 subjects in the below average service outcome condition classified the scenario as an average service outcome.

In summary, the manipulations appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided, what the relative valence of the incomplete information is, the consistency of the stereotype, and what service outcome is provided. Table 4.23 illustrates the data from which each of the manipulation values are derived for the doctor.

Table 4.23

Main Study Doctor Manipulation Checks

DOCTOR CONDITION

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Competence	55	3	21	79
Affect	8	61	33	102
Total	63	64	54	181

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Positive	81	2	3	1	87
Negative	28	42	14	10	94
Total	109	44	17	11	181

Stereotype Check

Stereotype	Consistent	Inconsiste	Total	Mean	SD
Consistent	67	26	93	4.4	0.80
Inconsistent	14	74	88	3.3	0.86
Total	81	100	181		

Service Outcome Check

Service Outcome	Excellent	Average	Below	Total
Excellent	49	10	1	60
Average	4	33	21	58
Below Average	2	13	48	63
Total	55	56	70	181

Lawyer

In the lawyer condition, each manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 2 df) = 80.1 (p < .001); (χ^2 (dimension valence 3 df) = 117.0 (p < .05); (χ^2 (stereotype consistency 1 df) = 80.1 (p < .001); and (χ^2 (service outcome 4 df) = 149.0 (p < .001).

Analysis of the dimension information manipulation reveals that 62 of the 101 subjects in the competence only condition correctly classified the scenario as containing competence information only, while 31 of the 101 subjects in the competence only condition classified the scenario as containing both competence and affect information. Additionally, 59 of the 94 subjects in the affect only condition correctly classified the scenario as containing affect information only, while 27 of the 94 subjects in the affect only condition classified the scenario as containing both competence and affect information. Only eight subjects expressed the contrasting belief when provided competence dimension information and eight subjects expressed the contrasting belief when provided affect dimension information.

Analysis of the dimension valence manipulation reveals that 88 of the 99 subjects in the positive only condition correctly classified the scenario as containing positive information only, while six of the 99 subjects in the positive only condition classified the scenario as both positive and negative information and five of the 99 subjects in the positive only condition classified the scenario as neither positive nor negative information. Additionally, 28 of the 96 subjects in the negative only condition correctly classified the scenario as containing negative information only, while 42 of the 96 subjects in the negative only condition classified the scenario as both positive and

negative information and 14 of the 96 subjects in the negative only condition classified the scenario as neither positive nor negative information. No subjects expressed the contrasting belief when provided positive dimension information and 12 subjects expressed the contrasting belief when provided negative dimension information.

Analysis of the stereotype consistency manipulation reveals that 83 of the 101 subjects in the stereotype consistent condition correctly classified the scenario as containing stereotype consistent information. Additionally, 77 of the 94 subjects in the stereotype inconsistent condition correctly classified the scenario as containing stereotype inconsistent information. Eighteen subjects expressed the contrasting belief when provided stereotype consistent information and 17 subjects expressed the contrasting belief when provided stereotype inconsistent information.

The second analysis of the stereotype consistency uses a one-way ANOVA which shows that subjects' typicalness perceptions varied between stereotype consistent and stereotype inconsistent ($F_{(df = 1, 193)} = 125.2$, $p < .001$). Subjects in the stereotype consistent condition report a mean typicalness score of 5.0 and subjects in the stereotype inconsistent condition report a mean typicalness score of 3.2.

Analysis of the service outcome manipulation reveals that 52 of the 64 subjects in the excellent service outcome condition correctly classified the scenario as an excellent service outcome, while 12 of the 64 subjects in the excellent service outcome condition classified the scenario as an average service outcome. Additionally, 29 of the 65 subjects in the average service outcome condition correctly classified the scenario as an average service outcome, while 13 of the 65 subjects in the average service outcome condition classified the scenario as an excellent service outcome and 23 of the 65 subjects

in the average service outcome condition classified the scenario as a below average service outcome. Lastly, 59 of the 66 subjects in the below average service outcome condition correctly classified the scenario as a below average service outcome, while seven of the 66 subjects in the below average service outcome condition classified the scenario as an average service outcome.

In summary, the manipulations appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided, what the relative valence of the incomplete information is, the consistency of the stereotype, and what service outcome is provided. Table 4.24 illustrates the data from which each of the manipulation values are derived for the lawyer.

Table 4.24

Main Study Lawyer Manipulation Checks

LAWYER CONDITION

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Competence	62	8	31	101
Affect	8	59	27	94
Total	70	67	58	195

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Positive	88	0	6	5	99
Negative	12	28	42	14	96
Total	100	28	48	19	195

Stereotype Check

Stereotype	Consistent	Inconsiste	Total	Mean	SD
Consistent	83	13	101	4.4	0.76
Inconsistent	17	77	94	3.5	0.87
Total	100	95	195		

Service Outcome Check

Service Outcome	Excellent	Average	Below	Total
Excellent	52	12	0	64
Average	13	29	23	65
Below Average	0	7	59	66
Total	65	48	82	195

Hair Stylist

In the hair stylist condition, each manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 2 df) = 80.1 (p < .001); (χ^2 (dimension valence 3 df) = 13.6 (p < .05); (χ^2 (stereotype consistency 1 df) = 123.0 (p < .001); and (χ^2 (service outcome 4 df) = 205.1 (p < .001).

Analysis of the dimension information manipulation reveals that 58 of the 93 subjects in the competence only condition correctly classified the scenario as containing

competence information only, while 32 of the 93 subjects in the competence only condition classified the scenario as containing both competence and affect information. Additionally, 48 of the 92 subjects in the affect only condition correctly classified the scenario as containing affect information only, while 37 of the 92 subjects in the affect only condition classified the scenario as containing both competence and affect information. Only three subjects expressed the contrasting belief when provided competence dimension information and seven subjects expressed the contrasting belief when provided affect dimension information.

Analysis of the dimension valence manipulation reveals that 85 of the 98 subjects in the positive only condition correctly classified the scenario as containing positive information only, while four of the 98 subjects in the positive only condition classified the scenario as both positive and negative information and eight of the 98 subjects in the positive only condition classified the scenario as neither positive nor negative information. Additionally, four of the 87 subjects in the negative only condition correctly classified the scenario as containing negative information only, while 13 of the 87 subjects in the negative only condition classified the scenario as both positive and negative information and 14 of the 87 subjects in the negative only condition classified the scenario as neither positive nor negative information. Only one subject expressed the contrasting belief when provided positive dimension information. However, 56 subjects expressed the contrasting belief when provided negative dimension information.

Upon further examination, 31 of the 56 subjects that expressed the contrasting belief were shown the competence negative condition, and 25 of the 56 subjects that expressed the contrasting belief were shown the affect negative condition. In the

competence negative dimension the hair stylist is described with the following "this hair stylist received on the job training, is available without waiting, and only performs cuts and styles," and in the affect negative dimension the hair stylist is described with the following "this hair stylist is quiet, reserved, and serious." Subjects may view each of these qualities as not overtly negative by themselves, and thus conclude them to be more positive than negative, selecting the positive valence rather than the negative valence.

Analysis of the stereotype consistency manipulation reveals that 96 of the 100 subjects in the stereotype consistent condition correctly classified the scenario as containing stereotype consistent information. Additionally, 74 of the 85 subjects in the stereotype inconsistent condition correctly classified the scenario as containing stereotype inconsistent information. Only four subjects expressed the contrasting belief when provided stereotype consistent information while 11 subjects expressed the contrasting belief when provided stereotype inconsistent information.

The second analysis of the stereotype consistency uses a one-way ANOVA which shows that subjects' typicalness perceptions varied between stereotype consistent and stereotype inconsistent ($F_{(df = 1, 183)}$ = 108.6, p < .001). Subjects in the stereotype consistent condition report a mean typicalness score of 4.9 and subjects in the stereotype inconsistent condition report a mean typicalness score of 3.1.

Analysis of the service outcome manipulation reveals that 60 of the 61 subjects in the excellent service outcome condition correctly classified the scenario as an excellent service outcome, while one of the 61 subjects in the excellent service outcome condition classified the scenario as an average service outcome. Additionally, 25 of the 61 subjects in the average service outcome condition correctly classified the scenario as an

average service outcome, while 32 of the 61 subjects in the average service outcome condition classified the scenario as an excellent service outcome and four of the 61 subjects in the average service outcome condition classified the scenario as a below average service outcome. Lastly, 61 of the 63 subjects in the below average service outcome condition correctly classified the scenario as a below average service outcome, while one of the 63 subjects in the below average service outcome condition classified the scenario as an excellent service outcome and one of the 63 subjects in the below average service outcome condition classified the scenario as an average service outcome.

In summary, the manipulations appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided, what the relative valence of the incomplete information is, the consistency of the stereotype, and what service outcome is provided. Table 4.25 illustrates the data from which each of the manipulation values are derived for the hair stylist.

Table 4.25

Main Study Hair Stylist Manipulation Checks

HAIR STYLIST CONDITION

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Competence	58	3	32	93
Affect	7	48	37	92
Total	65	51	69	185

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Positive	85	1	4	8	98
Negative	59	4	13	14	87
Total	141	5	17	22	185

Stereotype Check

Stereotype	Consistent	Inconsiste	Total	Mean	SD
Consistent	96	4	100	4.9	1.2
Inconsistent	11	74	85	3.1	1.2
Total	107	78	185		

Service Outcome Check

Service Outcome	Excellent	Average	Below	Total
Excellent	60	1	0	61
Average	32	25	4	61
Below Average	1	1	61	63
Total	93	27	65	185

Nail Technician

In the nail technician condition, each manipulation check is associated with a significant chi-square statistic with the pattern of responses in the corresponding direction for each manipulation (χ^2 (dimension information 2 df) $= 61.8$ (p $<$ .001); (χ^2 (dimension valence 3 df) $= 53.8$ (p $<$ .001); (χ^2 (stereotype consistency 1 df) $= 13.6$ (p $<$ .001); and (χ^2 (service outcome 4 df) $= 171.2$ (p $<$ .001).

Analysis of the dimension information manipulation reveals that 47 of the 79 subjects in the competence only condition correctly classified the scenario as

containing competence information only, while 26 of the 79 subjects in the competence only condition classified the scenario as containing both competence and affect information. Additionally, 43 of the 75 subjects in the affect only condition correctly classified the scenario as containing affect information only, while 27 of the 75 subjects in the affect only condition classified the scenario as containing both competence and affect information. Only six subjects expressed the contrasting belief when provided competence dimension information and five subjects expressed the contrasting belief when provided affect dimension information.

Analysis of the dimension valence manipulation reveals that 64 of the 77 subjects in the positive only condition correctly classified the scenario as containing positive information only, while seven of the 77 subjects in the positive only condition classified the scenario as both positive and negative information and two of the 77 subjects in the positive only condition classified the scenario as neither positive nor negative information. Additionally, 27 of the 77 subjects in the negative only condition correctly classified the scenario as containing negative information only, while 21 of the 77 subjects in the negative only condition classified the scenario as both positive and negative information and 10 of the 77 subjects in the negative only condition classified the scenario as neither positive nor negative information. Only four subjects expressed the contrasting belief when provided positive dimension information, however, 19 subjects expressed the contrasting belief when provided negative dimension information.

Upon further examination, 15 of the 19 subjects that expressed the contrasting belief were shown the competence negative condition, and four of the 19 subjects that

expressed the contrasting belief were shown the affect negative condition. In the competence negative dimension the nail technician is described with the following "this nail technician learned on the job, earned a GED, and performs only manicures." Subjects may view each of these qualities as not overtly negative by themselves, and thus conclude them to be more positive than negative, selecting the positive valence rather than the negative valence.

Analysis of the stereotype consistency manipulation reveals that 39 of the 68 subjects in the stereotype consistent condition correctly classified the scenario as containing stereotype consistent information. Additionally, 62 of the 86 subjects in the stereotype inconsistent condition correctly classified the scenario as containing stereotype inconsistent information. Twenty-nine subjects expressed the contrasting belief when provided stereotype consistent information and 24 subjects expressed the contrasting belief when provided stereotype inconsistent information.

Subjects in the stereotype consistent condition were provided the following description of the nail technician, "you notice that the nail technician is petite with black hair, has manicured finger nails, and wears a white smock over her clothing." Subjects in the stereotype inconsistent condition were provided the following description of the nail technician: "you notice that the nail technician has short, spiky blonde hair, blue eyes, and wears shorts, a t-shirt, and flip flops." One possibility for the high number of subjects expressing the contrasting belief when provided stereotype consistent or stereotype inconsistent information is that the nail technician they see or envision does not fit the description provided. Subjects in the stereotype consistent condition may have envisioned a nail technician working at an upscale spa,

whereas subjects in the stereotype inconsistent condition may have envisioned a 'typical' nail technician working at a local establishment for which to base their opinions.

The second analysis of the stereotype consistency uses a one-way ANOVA which shows that subjects' typicalness perceptions varied between stereotype consistent and stereotype inconsistent ($F_{(df = 1, 153)} = 25.34$, $p < .001$). Subjects in the stereotype consistent condition report a mean typicalness score of 4.5 and subjects in the stereotype inconsistent condition report a mean typicalness score of 3.4.

Analysis of the service outcome manipulation reveals that 49 of the 55 subjects in the excellent service outcome condition correctly classified the scenario as an excellent service outcome, while six of the 55 subjects in the excellent service outcome condition classified the scenario as an average service outcome. Additionally, 38 of the 50 subjects in the average service outcome condition correctly classified the scenario as an average service outcome, while four of the 50 subjects in the average service outcome condition classified the scenario as an excellent service outcome and seven of the 50 subjects in the average service outcome condition classified the scenario as a below average service outcome. Lastly, 40 of the 49 subjects in the below average service outcome condition correctly classified the scenario as a below average service outcome, while one of the 49 subjects in the below average service outcome condition classified the scenario as an excellent service outcome and eight of the 49 subjects in the below average service outcome condition classified the scenario as an average service outcome.

In summary, the manipulations appear successful. The pattern of results is consistent with successful manipulations of what type of partial information is provided, what the relative valence of the incomplete information is, the consistency of the stereotype, and what service outcome is provided. Table 4.26 illustrates the data from which each of the manipulation values are derived for the nail technician.

Table 4.26

Main Study Nail Technician Manipulation Checks

NAIL TECHNICIAN CONDITION

Dimension Information Check

Dimension	Competenc	Affect	Both	Total
Competence	47	6	26	79
Affect	5	43	27	75
Total	52	49	53	154

Dimension Valence Check

Dimension Valence	Positive	Negative	Both	Neither	Total
Positive	64	4	7	2	77
Negative	19	27	21	10	77
Total	83	31	28	12	154

Stereotype Check

Stereotype	Consistent	Inconsiste	Total	Mean	SD
Consistent	39	29	68	4.5	0.14
Inconsistent	24	62	86	3.4	1.36
Total	63	91	154		

Service Outcome Check

Service Outcome	Excellent	Average	Below	Total
Excellent	49	6	0	55
Average	5	38	7	50
Below Average	1	8	40	49
Total	55	52	47	154

Main Study Results

The experimental results are discussed in four parts. The first part provides summary statistics of subjects' feedback to each of the seven multi-item scales. The second part investigates the structure of multivariate data through the use of confirmatory factor analysis (CFA). The third part seeks to address the extent of the expected disconfirmation when service providers are affected by the innuendo, stereotype influence, and/or various service outcomes. Thus, it seeks to address Research Question 4a. The fourth part seeks to address the cognitive and affective effects when service providers are affected by the innuendo, stereotype influence, and/or various service outcomes. Thus, it seeks to address Research Question 4b.

Part One: Multi-Item Scales

Subjects provide feedback to seven multi-item scales. The expectation scale and the performance scale consist of ten-items created from relevant items in Cronin and Taylor's (1992) expectation and performance scales as modified from SERVQUAL (Parasuraman, Zeithaml, and Berry 1988). The disconfirmation scale consists of ten-items created by subtracting the expectation scale from the performance scale. The attitude scale consists of eleven-items taken from previous research (Zhuang, 2010). The behavioral intention scale consists of three-items taken from previous research (Cronin, Brady, and Hult 2000). The quality scale consists of three-items taken from previous research (Cronin, Brady, and Hult 2000). The satisfaction scale consists of four-items taken from previous research (Babin and Griffin, 1998). Appendix F provides the principal component analysis results for each of the multi-item scales.

Doctor

The coefficient alpha (α) for the expectation scale is .92 (N=181). Scale statistics show a summed scale mean equal to 48.17 with a standard deviation equal to 12.56. This equates to a grand mean for an averaged scale equal to 4.82 out of a seven-point scale, with a minimum single-item mean of 4.35 and a maximum-single item mean of 5.29. Principal component analysis results indicate that a single-factor solution contains 57.75 percent of variance explained. Thus, the expectations scale is acceptable for further analyses.

The coefficient alpha (α) for the performance scale is .97 (N=181). Scale statistics show a summed scale mean equal to 41.22 with a standard deviation equal to 18.82. This equates to a grand mean for an averaged scale equal to 4.12 out of a seven-point scale, with a minimum single-item mean of 3.74 and a maximum-single item mean of 4.43. Principal component analysis results indicate that a single-factor solution contains 76.38 percent of variance explained. Thus, the performance scale is acceptable for further analyses.

The coefficient alpha (α) for the disconfirmation scale is .95 (N=181). Scale statistics show a summed mean equal to -6.95 with a standard deviation equal to 20.53. This equates to a grand mean for an averaged scale equal to -.70, with a minimum single-item mean of -1.35 and a maximum-single item mean of -.24. Principal component analysis results indicate that a single-factor solution contains 69.2 percent of variance explained. Thus, the disconfirmation scale is acceptable for further analyses.

The coefficient alpha (α) for the attitudes scale is .97 (N=181). Scale statistics show a summed scale mean equal to 45.5 with a standard deviation equal to 18.6. This

equates to a grand mean for an averaged scale equal to 4.13 out of a seven-point scale, with a minimum single-item mean of 3.61 and a maximum-single item mean of 5.04. Principal component analysis results indicate that a single-factor solution contains 78.07 percent of variance explained. Thus, the attitudes scale is acceptable for further analyses.

The coefficient alpha (α) for the behavioral intentions scale is .99 (N=181). Scale statistics show a summed mean equal to 124.87 with a standard deviation equal to 116.94. This equates to a grand mean for an averaged scale equal to 41.62 out of a one hundred point scale, with a minimum single-item mean of 39.67 and a maximum-single item mean of 43.60. Principal component analysis results indicate that a single-factor solution contains 97.7 percent of variance explained. Thus, the behavioral intentions scale is acceptable for further analyses.

The coefficient alpha (α) for the quality scale is .97 (N=181). Scale statistics show a summed mean equal to 11.32 with a standard deviation equal to 6.36. This equates to a grand mean for an averaged scale equal to 3.77 out of a seven-point scale, with a minimum single-item mean of 3.72 and a maximum-single item mean of 3.84. Principal component analysis results indicate that a single-factor solution contains 95.05 percent of variance explained. Thus, the quality scale is acceptable for further analyses.

The coefficient alpha (α) for the satisfaction scale is .99 (N=181). Principal component analysis results indicate that a single-factor solution contains 95.9 percent of variance explained. Thus, the satisfaction scale is acceptable for further analyses.

Lawyer

The coefficient alpha (α) for the expectation scale is .89 (N=195). Scale statistics show a summed scale mean equal to 47.84 with a standard deviation equal to 10.90. This

equates to a grand mean for an averaged scale equal to 4.78 out of a seven-point scale, with a minimum single-item mean of 4.23 and a maximum-single item mean of 5.46. Principal component analysis results indicate that a single-factor solution contains 50.45 percent of variance explained. Thus, the expectations scale is acceptable for further analyses.

The coefficient alpha (α) for the performance scale is .97 (N=195). Scale statistics show a summed scale mean equal to 40.62 with a standard deviation equal to 17.83. This equates to a grand mean for an averaged scale equal to 4.06 out of a seven-point scale, with a minimum single-item mean of 3.54 and a maximum-single item mean of 4.31. Principal component analysis results indicate that a single-factor solution contains 78.26 percent of variance explained. Thus, the performance scale is acceptable for further analyses.

The coefficient alpha (α) for the disconfirmation scale is .93 (N=195). Scale statistics show a summed scale mean equal to -7.22 with a standard deviation equal to 17.51. This equates to a grand mean for an averaged scale equal to -.72, with a minimum single-item mean of -1.15 and a maximum-single item mean of -.50. Principal component analysis results indicate that a single-factor solution contains 63.00 percent of variance explained. Thus, the disconfirmation scale is acceptable for further analyses.

The coefficient alpha (α) for the attitude scale is .97 (N=195). Scale statistics show a summed scale mean equal to 45.40 with a standard deviation equal to 17.00. This equates to a grand mean for an averaged scale equal to 4.13 out of a seven-point scale, with a minimum single-item mean of 3.62 and a maximum-single item mean of 4.80.

Principal component analysis results indicate that a single-factor solution contains 75.50 percent of variance explained. Thus, the attitudes scale is acceptable for further analyses.

The coefficient alpha (α) for the behavioral intentions scale is .98 (N=195). Scale statistics show a summed scale mean equal to 123.70 with a standard deviation equal to 108.17. This equates to a grand mean for an averaged scale equal to 41.23 out of a one hundred point scale, with a minimum single-item mean of 39.47 and a maximum-single item mean of 43.04. Principal component analysis results indicate that a single-factor solution contains 96.37 percent of variance explained. Thus, the behavioral intentions scale is acceptable for further analyses.

The coefficient alpha (α) for the attitudes scale is .96 (N=195). Scale statistics show a summed scale mean equal to 11.58 with a standard deviation equal to 6.32. This equates to a grand mean for an averaged scale equal to 3.86 out of a seven-point scale, with a minimum single-item mean of 3.82 and a maximum-single item mean of 3.91. Principal component analysis results indicate that a single-factor solution contains 93.27 percent of variance explained. Thus, the quality scale is acceptable for further analyses.

Satisfaction consists of a four-item scale taken from previous research. The coefficient alpha (α) for the satisfaction scale is .99 (N=195). Principal component analysis results indicate that a single-factor solution contains 96.00 percent of variance explained. Thus, the satisfaction scale is acceptable for further analyses.

Hair Stylist

The coefficient alpha (α) for the expectation scale is .92 (N=185). Scale statistics show a summed scale mean equal to 52.72 with a standard deviation equal to 11.39. This equates to a grand mean for an averaged scale equal to 5.27 out of a seven-point scale,

with a minimum single-item mean of 4.65 and a maximum-single item mean of 5.85. Principal component analysis results indicate that a single-factor solution contains 58.9 percent of variance explained. Thus, the expectations scale is acceptable for further analyses.

The coefficient alpha (α) for the performance scale is .96 (N=185). Scale statistics show a summed scale mean equal to 46.06 with a standard deviation equal to 19.50. This equates to a grand mean for an averaged scale equal to 4.61 out of a seven-point scale, with a minimum single-item mean of 4.03 and a maximum-single item mean of 5.05. Principal component analysis results indicate that a single-factor solution contains 75.7 percent of variance explained. Thus, the performance scale is acceptable for further analyses.

The coefficient alpha (α) for the disconfirmation scale is .95 (N=185). Scale statistics show a summed scale mean equal to -6.66 with a standard deviation equal to 21.63. This equates to a grand mean for an averaged scale equal to -.67, with a minimum single-item mean of -1.53 and a maximum-single item mean of 0.18. Principal component analysis results indicate that a single-factor solution contains 70.2 percent of variance explained. Thus, the disconfirmation scale is acceptable for further analyses.

The coefficient alpha (α) for the attitude scale is .99 (N=185). Scale statistics show a summed scale mean equal to 49.92 with a standard deviation equal to 22.54. This equates to a grand mean for an averaged scale equal to 4.54 out of a seven-point scale, with a minimum single-item mean of 4.14 and a maximum-single item mean of 5.07. Principal component analysis results indicate that a single-factor solution contains 87.2 percent of variance explained. Thus, the attitude scale is acceptable for further analyses.

The coefficient alpha (α) for the behavioral intentions scale is .99 (N=185). Scale statistics show a summed scale mean equal to 162.75 with a standard deviation equal to 129.06. This equates to a grand mean for an averaged scale equal to 54.25 out of a one hundred point scale, with a minimum single-item mean of 53.00 and a maximum-single item mean of 55.18. Principal component analysis results indicate that a single-factor solution contains 98.9 percent of variance explained. Thus, the behavioral intentions scale is acceptable for further analyses.

The coefficient alpha (α) for the quality scale is .98 (N=185). Scale statistics show a summed scale mean equal to 13.43 with a standard deviation equal to 7.39. This equates to a grand mean for an averaged scale equal to 4.48 out of a seven-point scale, with a minimum single-item mean of 4.40 and a maximum-single item mean of 4.53. Principal component analysis results indicate that a single-factor solution contains 95.9 percent of variance explained. Thus, the quality scale is acceptable for further analyses.

The coefficient alpha (α) for the satisfaction scale is .99 (N=185). Principal component analysis results indicate that a single-factor solution contains 97.6 percent of variance explained. Thus, the satisfaction scale is acceptable for further analyses.

Nail Technician

The coefficient alpha (α) for the expectation scale is .94 (N=154). Scale statistics show a summed scale mean equal to 47.98 with a standard deviation equal to 12.25. This equates to a grand mean for an averaged scale equal to 4.80 out of a seven-point scale, with a minimum single-item mean of 4.35 and a maximum-single item mean of 5.03. Principal component analysis results indicate that a single-factor solution contains 64.50

percent of variance explained. Thus, the expectations scale is acceptable for further analyses.

The coefficient alpha (α) for the performance scale is .97 (N=154). Scale statistics show a summed scale mean equal to 43.27 with a standard deviation equal to 18.35. This equates to a grand mean for an averaged scale equal to 4.33 out of a seven-point scale, with a minimum single-item mean of 3.86 and a maximum-single item mean of 4.77. Principal component analysis results indicate that a single-factor solution contains 77.15 percent of variance explained. Thus, the performance scale is acceptable for further analyses.

The coefficient alpha (α) for the disconfirmation scale is .96 (N=154). Scale statistics show a summed scale mean equal to -4.70 with a standard deviation equal to 21.04. This equates to a grand mean for an averaged scale equal to -.47, with a minimum single-item mean of -1.10 and a maximum-single item mean of -.16. Principal component analysis results indicate that a single-factor solution contains 72.84 percent of variance explained. Thus, the disconfirmation scale is acceptable for further analyses.

The coefficient alpha (α) for the attitude scale is .98 (N=154). Scale statistics show a summed scale mean equal to 47.66 with a standard deviation equal to 20.23. This equates to a grand mean for an averaged scale equal to 4.33 out of a seven-point scale, with a minimum single-item mean of 3.93 and a maximum-single item mean of 4.94. Principal component analysis results indicate that a single-factor solution contains 84.47 percent of variance explained. Thus, the attitude scale is acceptable for further analyses.

The coefficient alpha (α) for the behavioral intentions scale is .99 (N=154). Scale statistics show a summed scale mean equal to 159.97 with a standard deviation equal to

113.81. This equates to a grand mean for an averaged scale equal to 53.32 out of a one hundred point scale, with a minimum single-item mean of 52.37 and a maximum-single item mean of 54.73. Principal component analysis results indicate that a single-factor solution contains 98.05 percent of variance explained. Thus, the behavioral intentions scale is acceptable for further analyses.

The coefficient alpha (α) for the attitudes scale is .93 (N=154). Scale statistics show a summed scale mean equal to 12.03 with a standard deviation equal to 6.20. This equates to a grand mean for an averaged scale equal to 4.01 out of a seven-point scale, with a minimum single-item mean of 3.96 and a maximum-single item mean of 4.06. Principal component analysis results indicate that a single-factor solution contains 88.17 percent of variance explained. Thus, the quality scale is acceptable for further analyses.

The coefficient alpha (α) for the satisfaction scale is .98 (N=154). Principal component analysis results indicate that a single-factor solution contains 95.25 percent of variance explained. Thus, the satisfaction scale is acceptable for further analyses.

Part Two: Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is used to verify the factor structure of the set of observed variables. A chi-squared test with associated degrees of freedom is the first measure to assess model fit (Hair et al. 2010). Additionally, the CFI (incremental fit index) and RMSEA (badness of fit index) will be used to assess model fit. Construct validity is assessed in four ways: convergent validity, discriminant validity, nomological validity, and face validity.

Convergent validity indicates the latent construct and the measured variables should 'converge' or share a high percentage of variance in common (Hair et al. 2010).

We would expect the factor loadings to be a minimum of .5 and hopefully above .7. Discriminant validity is the extent to which an individual construct is different from the other constructs. Discriminant validity is tested by examining whether the variance extracted for each factor exceeds the square for the estimated correlations between the two factors (Babin et al. 1994; Hair et al. 2010). Nomological validity is a measure to examine whether the relationships make theoretical sense. Face validity is determined prior to collecting the data by having expert judges examine the question sets to assess the extent to which they measure what they are intended to measure (Babin and Griffin 1998).

Doctor

Confirmatory factor analysis (CFA) is conducted to examine the psychometric properties and validate the proposed measurement theory involved in the analysis. Given the sample size (n=181) and number of observed values (m=31), acceptable fit indicators for the model are as follows: CFI greater than .92, and RMSEA less than 0.08 (Hair et al., 2010). The CFA shows a chi-square value of 1,295.8 (df = 424, p < .001), a comparative fit index (CFI) of .91, and a root-mean-squared error of approximation (RMSEA) of 0.107. Thus, the CFA model is reasonably consistent with the recommended guidelines and will be used for further analysis.

The t-value for each loading estimate is significant (p < .001). One indication of construct validity is to assess whether the standardized estimates exceed the minimum threshold of 0.5 (Hair et al., 2010). All standardized loadings do exceed the 0.5 threshold. A second measure to assess construct validity is to evaluate whether or not the variance extracted exceeds a minimum level of 0.5. Each of the five constructs does

exhibit variance extracted estimates greater than the 0.5 minimum. Additionally, each of the five constructs exceeds the 0.7 threshold for construct reliability estimates.

Discriminant validity is examined by assessing whether the construct explains more variance with its own indicators than it does with other constructs. Disconfirmation's average variance extracted (AVE) is 0.66 while the highest interconstruct correlation (Φ^2) matrix is 0.53. Behavioral intention's AVE is 0.97 while the highest interconstruct correlation (Φ^2) matrix is 0.94. Quality has an AVE equal to 0.92, which is lower than one of the relevant Φ^2 coefficients: Quality - Satisfaction (0.96). Attitude has an AVE equal to .75, which is lower than three of the relevant Φ^2 coefficients: Attitude - Quality (0.90), Attitude - Satisfaction (0.88), and Attitude - Behavioral Intentions (0.85). Satisfaction has an AVE equal to .94, which is lower than two of the relevant Φ^2 coefficients: Satisfaction - Quality (0.96) and Satisfaction - Behavioral Intentions (0.94). Thus, quality, attitude, and satisfaction require further testing to assure discriminant validity.

The chi-square difference between quality and satisfaction as a one factor and two factor model is 43.62 with one degree of freedom ($p < .001$) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between attitude and quality as a one factor and two factor model is 124.27 with one degree of freedom ($p < .001$) indicates a significant improvement in fit for the two-factor model over the unidimensional model, and evidence of discriminant validity. The chi-square difference between attitude and satisfaction as a one factor and two factor model is 272.63 with one degree of freedom ($p < .001$) indicates a significant improvement in fit for the two-factor model over the

unidimensional model, and evidence of discriminant validity. The chi-square difference between attitude and behavioral intentions as a one factor and two factor model is 385.26 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over the unidimensional model, and evidence of discriminant validity. The chi-square difference between satisfaction and behavioral intentions as a one factor and two factor model is 125.07 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity.

Table 4.27 displays the CFA findings and can be read assuming QUAL is quality, DISC is disconfirmation, ATT is attitude, SAT is satisfaction, and INT is behavioral intentions. Table 4.28 displays the Φ and Φ^2 matrices respectively.

Table 4.27

Main Study Doctor CFA

	QUAL	DISC	ATT	SAT	INT
QUAL1	0.98				
QUAL2	0.93				
QUAL3	0.98				
DISC1		0.86			
DISC2		0.72			
DISC3		0.86			
DISC4		0.81			
DISC5		0.82			
DISC6		0.79			
DISC7		0.81			
DISC8		0.81			
DISC9		0.76			
DISC10		0.87			
ATT1			0.91		
ATT2			0.92		
ATT3			0.73		
ATT4			0.91		
ATT5			0.95		
ATT6			0.78		
ATT7			0.81		
ATT8			0.79		
ATT9			0.74		
ATT10			0.96		
ATT11			0.96		
SAT1				0.98	
SAT2				0.96	
SAT3				0.97	
SAT4				0.98	
INT1					0.99
INT2					0.98
INT3					0.97
Variance Extracted	92.40%	65.83%	74.58%	94.34%	96.57%
Construct Reliability	0.97	0.95	0.97	0.99	0.99

Table 4.28

Main Study Doctor Φ and Φ² Matrices

Φ Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	0.68	1			
ATT	0.95	0.73	1		
SAT	0.98	0.68	0.94	1	
INT	0.95	0.70	0.92	0.97	1

Φ² Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	0.47	1			
ATT	0.90	0.53	1		
SAT	0.96	0.47	0.88	1	
INT	0.90	0.48	0.85	0.94	1

Lawyer

Confirmatory factor analysis (CFA) is conducted to examine the psychometric properties and validate the proposed measurement theory involved in the analysis. Given the sample size (n=195) and the number of observed values (m=31), acceptable fit indicators for the model are as follows: CFI greater than .92, and RMSEA less than 0.08 (Hair et al., 2010). The CFA shows a chi-square value of 1,317.72 (df = 424, p < .001), a comparative fit index (CFI) of .90, and a root-mean-squared error of approximation (RMSEA) of 0.104. Thus, the CFA model is reasonably consistent with the recommended guidelines and will be used for further analysis.

The t-value for each loading estimate is significant (p < .001). One indication of construct validity is to assess whether the standardized estimates exceed the minimum threshold of 0.5 (Hair et al., 2010). All standardized loadings do exceed the 0.5 threshold. A second measure to assess construct validity is to evaluate whether or not the

variance extracted exceeds a minimum level of 0.5. Each of the five constructs demonstrates variance extracted estimates greater than the 0.5 minimum. Additionally, each of the five constructs exceeds the 0.7 threshold for construct reliability estimates.

Discriminant validity is examined by assessing whether the construct explains more variance with its own indicators than it does with other constructs. Satisfaction's average variance extracted (AVE) is 0.95 while the highest interconstruct correlation (Φ^2) matrix is 0.94. Behavioral intention's AVE is 0.95 while the highest interconstruct correlation (Φ^2) matrix is 0.94. Quality has an AVE equal to .90, which is lower than one of the relevant Φ^2 coefficients: Quality - Satisfaction (.94). Attitude has an AVE equal to .72, which is lower than three of the relevant Φ^2 coefficients: Attitude - Quality (.86), Attitude - Satisfaction (.86), and Attitude - Behavioral Intentions (.84). Disconfirmation has an AVE equal to .59, which is lower than three of the relevant Φ^2 coefficients: Disconfirmation - Quality (.60), Disconfirmation - Satisfaction (.60), and Disconfirmation - Behavioral Intentions (.60). Thus, quality, attitudes, and disconfirmation require further testing to assure discriminant validity.

The chi-square difference between quality and satisfaction as a one factor and two factor model is 95.28 with one degree of freedom ($p < .001$) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between attitude and quality as a one factor and two factor model is 189.87 with one degree of freedom ($p < .001$) indicates a significant improvement in fit for the two-factor model over the unidimensional model, and evidence of discriminant validity. The chi-square difference between attitude and satisfaction as a one factor and two factor model is 330.74 with one degree of freedom (p

< .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between attitude and behavioral intentions as a one factor and two factor model is 287.26 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between disconfirmation and quality as a one factor and two factor model is 441.52 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between disconfirmation and satisfaction as a one factor and two factor model is 489.14 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between disconfirmation and behavioral intentions as a one factor and two factor model is 474.12 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity.

Table 4.29 displays the CFA findings and can be read assuming QUAL is quality, DISC is disconfirmation, ATT is attitude, SAT is satisfaction, and INT is behavioral intentions. Table 4.30 displays the Φ and Φ^2 matrices respectively.

Table 4.29

Main Study Lawyer CFA

	QUAL	DISC	ATT	SAT	INT
QUAL1	.99				
QUAL2	.88				
QUAL3	.97				
DISC1		.81			
DISC2		.60			
DISC3		.76			
DISC4		.76			
DISC5		.82			
DISC6		.75			
DISC7		.85			
DISC8		.71			
DISC9		.77			
DISC10		.84			
ATT1			.91		
ATT2			.88		
ATT3			.78		
ATT4			.88		
ATT5			.92		
ATT6			.73		
ATT7			.84		
ATT8			.80		
ATT9			.71		
ATT10			.94		
ATT11			.92		
SAT1				.98	
SAT2				.97	
SAT3				.97	
SAT4				.97	
INT1					.99
INT2					.97
INT3					.96
Variance Extracted	90.04%	59.15%	72.17%	94.53%	94.62%
Construct Reliability	0.96	0.93	0.97	0.99	0.98

Table 4.30

Main Study Lawyer Φ and Φ^2 Matrices

Φ Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	0.77	1			
ATT	0.93	0.72	1		
SAT	0.97	0.78	0.93	1	
INT	0.94	0.77	0.92	0.97	1

Φ^2 Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	0.60	1			
AT	0.86	0.52	1		
SAT	0.94	0.60	0.86	1	
INT	0.89	0.60	0.84	0.94	1

Hair Stylist

Confirmatory factor analysis (CFA) is conducted to examine the psychometric properties and validate the proposed measurement theory involved in the analysis. Given the sample size (n=185) and the number of observed values (m=31), acceptable fit indicators for the model are as follows: CFI greater than .92, and RMSEA less than 0.08 (Hair et al., 2010). The CFA shows a chi-square value of 966.50 (df = 424, p < .001), a comparative fit index (CFI) of .95, and a root-mean-squared error of approximation (RMSEA) of 0.083. Thus, the CFA model is consistent with the recommended guidelines and will be used for further analysis.

The t-value for each loading estimate is significant (p < .001). One indication of construct validity is to assess whether the standardized estimates exceed the minimum threshold of 0.5 (Hair et al., 2010). All standardized loadings do exceed the 0.5 threshold. A second measure to assess construct validity is to evaluate whether or not the

variance extracted exceeds a minimum level of 0.5. Each of the five constructs demonstrates variance extracted estimates greater than the 0.5 minimum. Additionally, each of the five constructs exceeds the 0.7 threshold for construct reliability estimates.

Discriminant validity is examined by assessing whether the construct explains more variance with its own indicators than it does with other constructs. Behavioral intention's average variance extracted (AVE) is 0.98 while the highest interconstruct correlation (Φ^2) matrix is 0.83. Quality has an AVE equal to .94, which is lower than two of the relevant Φ-squared coefficients: Quality - Attitude (.95) and Quality - Satisfaction (.99). Disconfirmation has an AVE equal to .67, which is lower than one of the relevant Φ^2 coefficients: Disconfirmation - Quality (.70). Attitude has an AVE equal to .86, which is lower than two of the relevant Φ^2 coefficients: Attitude - Quality (.95) and Attitude - Satisfaction (.94). Satisfaction has an AVE equal to .97, which is lower than one of the relevant Φ^2 coefficients: Satisfaction - Quality (.99). Thus, quality, disconfirmation, attitude, and satisfaction require further testing to assure discriminant validity.

The chi-square difference between quality and attitudes as a one factor and two factor model is 104.96 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between quality and satisfaction as a one factor and two factor model is 23.27 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between disconfirmation and quality as a one factor and two factor model is 482.62 with one

degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity. The chi-square difference between attitudes and satisfaction as a one factor and two factor model is 283.31 with one degree of freedom (p < .001) indicates a significant improvement in fit for the two-factor model over a unidimensional model, and evidence of discriminant validity.

Table 4.31 displays the CFA findings and can be read assuming QUAL is quality, ATT is attitude, DISC is disconfirmation, SAT is satisfaction, and INT is behavioral intentions. Table 4.32 displays the Φ and Φ^2 matrices respectively.

Table 4.31

Main Study Hair Stylist CFA

	QUAL	DISC	ATT	SAT	INT
QUAL1	0.99				
QUAL2	0.93				
QUAL3	0.98				
DISC1		0.78			
DISC2		0.72			
DISC3		0.93			
DISC4		0.77			
DISC5		0.77			
DISC6		0.93			
DISC7		0.90			
DISC8		0.69			
DISC9		0.73			
DISC10		0.92			
ATT1			0.97		
ATT2			0.94		
ATT3			0.83		
ATT4			0.95		
ATT5			0.97		
ATT6			0.84		
ATT7			0.96		
ATT8			0.93		
ATT9			0.88		
ATT10			0.95		
ATT11			0.94		
SAT1				0.97	
SAT2				0.99	
SAT3				0.99	
SAT4				0.98	
INT1					0.99
INT2					0.99
INT3					0.99
Variance Extracted	93.53%	66.89%	85.65%	96.88%	98.08%
Construct Reliability	0.98	0.95	0.98	0.99	0.99

Table 4.32

Main Study Hair Stylist Φ and Φ^2 Matrices

Φ Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	0.84	1			
ATT	0.98	0.82	1		
SAT	0.99	0.81	0.97	1	
INT	0.91	0.77	0.88	0.91	1

Φ^2 Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	0.70	1			
ATT	0.95	0.66	1		
SAT	0.99	0.66	0.94	1	
INT	0.82	0.59	0.78	0.83	1

Nail Technician

Confirmatory factor analysis (CFA) is conducted to examine the psychometric properties and validate the proposed measurement theory involved in the analysis. Given the sample size (n=154) and the number of observed values (m=31), acceptable fit indicators for the model are as follows: CFI greater than .92, and RMSEA less than 0.08 (Hair et al., 2010). The CFA shows a chi-squared value of 894.12 (df = 424, p < .001), a comparative fit index (CFI) of .94, and a root-mean-squared error of approximation (RMSEA) of 0.085. Thus, the CFA model is consistent with the recommended guidelines and will be used for further analysis.

The t-value for each loading estimate is significant (p < .001). One indication of construct validity is to assess whether the standardized estimates exceed the minimum threshold of 0.5 (Hair et al., 2010). All standardized loadings do exceed the 0.5 threshold. A second measure to assess construct validity is to evaluate whether or not the

variance extracted exceeds a minimum level of 0.5. Each of the five constructs demonstrates variance extracted estimates greater than the 0.5 minimum. Additionally, each of the five constructs exceeds the 0.7 threshold for construct reliability estimates.

Discriminant validity is examined by assessing whether the construct explains more variance with its own indicators than it does with other constructs. Disconfirmation's average variance extracted (AVE) is 0.70 while the highest interconstruct correlation (Φ^2) matrix is 0.62. Behavioral intention's AVE is 0.97 while the highest interconstruct correlation (Φ^2) matrix is 0.94. Quality has an AVE equal to .83, which is lower than three of the relevant Φ^2 coefficients: Quality - Attitude (.89), Quality - Satisfaction (.94), and Quality - Behavioral Intentions (.86). Attitude has an AVE equal to .83, which is lower than three of the relevant Φ^2 coefficients: Attitude - Quality (.89), Attitude - Satisfaction (.89), and Attitude - Behavioral Intentions (.85). Satisfaction has an AVE equal to .94, which is lower than two of the relevant Φ^2 coefficients: Satisfaction - Quality (.94) and Satisfaction - Behavioral Intentions (.94). Thus, quality, attitudes, and satisfaction require further testing to assure discriminant validity.

The chi-squared difference between quality and attitudes as a one factor and two factor model is 90.782 with one degree of freedom (p < .001) indicating a significant improvement in fit using the two-factor model, and evidence of discriminant validity. The chi-squared difference between quality and satisfaction as a one factor and two factor model is 35.027 with one degree of freedom (p < .001) indicating a significant improvement in fit using the two-factor model, and evidence of discriminant validity. The chi-squared difference between quality and behavioral intentions as a one factor and

two factor model is 108.401 with one degree of freedom (p < .001) indicating a significant improvement in fit using the two-factor model, and evidence of discriminant validity. The chi-squared difference between attitudes and satisfaction as a one factor and two factor model is 305.991 with two degrees of freedom (p < .001) indicating a significant improvement in fit using the two-factor model, and evidence of discriminant validity. The chi-squared difference between attitudes and behavioral intentions as a one factor and two factor model is 341.753 with one degree of freedom (p < .001) indicating a significant improvement in fit using the two-factor model, and evidence of discriminant validity. The chi-squared difference between satisfaction and behavioral intentions as a one factor and two factor model is 130.315 with one degree of freedom (p < .001) indicating a significant improvement in fit using the two-factor model, and evidence of discriminant validity.

Table 4.33 displays the CFA findings and can be read assuming QUAL is quality, ATT is attitude, DISC is disconfirmation, SAT is satisfaction, and INT is behavioral intentions. Table 4.34 displays the Φ and Φ^2 matrices respectively.

Table 4.33

Main Study Nail Technician CFA

	QUAL	DISC	ATT	SAT	INT
QUAL1	0.97				
QUAL2	0.78				
QUAL3	0.97				
DISC1		0.83			
DISC2		0.69			
DISC3		0.93			
DISC4		0.77			
DISC5		0.84			
DISC6		0.94			
DISC7		0.89			
DISC8		0.71			
DISC9		0.83			
DISC10		0.90			
ATT1			0.95		
ATT2			0.90		
ATT3			0.81		
ATT4			0.93		
ATT5			0.94		
ATT6			0.89		
ATT7			0.90		
ATT8			0.91		
ATT9			0.92		
ATT10			0.94		
ATT11			0.92		
SAT1				0.98	
SAT2				0.95	
SAT3				0.97	
SAT4				0.97	
INT1					0.99
INT2					0.99
INT3					0.98
Variance Extracted	83.02%	69.93%	82.75%	93.57%	97.09%
Construct Reliability	0.94	0.96	0.98	0.98	0.99

Table 4.34

Main Study Nail Technician Φ and Φ^2 Matrices

Φ Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	0.73	1			
ATT	0.95	0.72	1		
SAT	0.97	0.77	0.95	1	
INT	0.93	0.79	0.92	0.97	1

Φ^2 Matrix	QUAL	DISC	ATT	SAT	INT
QUAL	1				
DISC	.54	1			
ATT	.89	.52	1		
SAT	.94	.59	.89	1	
INT	.86	.62	.85	.94	1

Part Three: Research Question 4a

Part three centers on Research Question 4a. Research Question 4a focuses on the extent of the expected disconfirmation when service providers are affected by the innuendo effect, stereotype influence, and/or various service outcomes. Hypothesis seven states the a subject exposed to a stereotypically inconsistent service provider that delivers excellent service will have higher positive attitudes than a subject exposed to a stereotypically consistent service provider also delivering excellent service. Hypothesis eight states that a subject exposed to a stereotypically inconsistent service provider and the innuendo effect will results in the strongest negative disconfirmation (a subject exposed to a stereotypically consistent service provider and the innuendo effect will result in a positive disconfirmation).

Doctor

To test hypothesis seven a univariate general linear model (GLM) is conducted with subject attitudes as the dependent variable and stereotype and service outcome as the experimental variables. The model yields an F $(df = 5, 175)$, $R^2 = .628$) of 59 (p < .001). The main effect for stereotype is not significant with an F $(df = 1, 175)$ of 2.5 (p = .114), however the main effect for service outcome is significant with an F $(df = 2, 175)$ of 144.2 (p < .001). Subjects report a mean attitude of 4.1 when exposed to a stereotype consistent doctor and a mean attitude of 4.1 when exposed to a stereotype inconsistent doctor. Subjects in the excellent service outcome report a mean attitude of 5.9, while subjects in the average service outcome report a mean attitude of 3.7, and subjects in the below average service outcome report a mean attitude of 2.8. The 2-way interaction between stereotype and service outcome is not significant with an F $(df = 2, 175)$ of 1.8 (p = .162). Table 4.35 displays the GLM results and Table 4.36 displays the means for attitudes. Hypothesis seven is not supported because the interaction between stereotype and service outcome is not significant on attitude for the doctor.

Table 4.35

Main Study Doctor H7 GLM

	Attitudes		
	df	F	Sig.
Main Effects			
Stereotype	1	2.5	.114
Service Outcome	2	144.2	.000
Two-Way Interaction			
Stereotype x Service Outcome	2	1.8	.162

Table 4.36

Main Study Doctor H₇ Means

	Attitudes		
	STEREOTYPE		
OUTCOME	Consistent	Inconsistent	Total
Excellent	5.8	6.0	5.9
Average	3.9	3.4	3.7
Below Average	3.0	2.6	2.8
Total	4.2	4.0	4.1

To test hypothesis eight a univariate (GLM) is conducted with disconfirmation as the dependent variable and stereotype and innuendo as the experimental variables. The model yields an F $(df = 7, 173, R^2 = .12)$ of 3.46 (p < .05). The main effect for innuendo is not significant with an F $(df = 3, 173)$ of 2.02 (p = .113), however, the main effect of stereotype is significant with an F $(df = 1, 173)$ of 13.81 (p < .001). Subjects in the competence positive condition report a mean disconfirmation of -0.66 and subjects in the competence negative condition report a mean disconfirmation of -0.16. Subjects in the affect positive condition report a mean disconfirmation of -1.2 and subjects in the affect negative condition report a mean disconfirmation of -0.67. Subjects report a mean disconfirmation of -1.2 when exposed to a stereotype consistent doctor and a mean disconfirmation of -0.13 when exposed to a stereotype inconsistent doctor. The interaction between innuendo and stereotype is not significant with an F $(df = 3, 173)$ of 1.19 (p = .317). Table 4.37 displays the univariate GLM results for disconfirmation and Table 4.38 displays the means for disconfirmation. Hypothesis eight is not supported because the interaction between innuendo and stereotype is not significant.

Table 4.37

Main Study Doctor H₈ GLM

	Disconfirmation		
	df	F	Sig.
Main Effects			
Innuendo	3	2.02	.113
Stereotype	1	13.81	.000
Two-Way Interaction			
Stereotype x Innuendo	3	1.19	.317

Table 4.38

Main Study Doctor H₈ Means

	Disconfirmation		
	STEREOTYPE		
INNUENDO	Consistent	Inconsistent	Total
Comp Positive	-1.1	-0.21	-0.66
Comp Negative	-0.97	0.54	-0.16
Affect Positive	-2.04	-0.37	-1.20
Affect Negative	-0.82	-0.48	-0.67
Innuendo Total	-1.2	-0.13	-0.70

Lawyer

To test hypothesis seven a univariate general linear model (GLM) is conducted with subject attitudes as the dependent variable and stereotype and service outcome as the experimental variables. The model yields an F $(df = 5, 189$, $R^2 = .514)$ of 40 (p < .001). The main effect for stereotype is not significant with an F $(df = 1, 189)$ of 2.01 (p = .158), however, the main effect for service outcome is significant with an F $(df = 2, 189)$ of 95.68 (p < .001). Subjects report a mean attitude of 4.3 when exposed to a stereotype consistent lawyer and a mean attitude of 3.9 when exposed to a stereotype inconsistent lawyer.

Subjects in the excellent service outcome report a mean attitude of 5.5, while subjects in the average service outcome report a mean attitude of 4.1, and subject in the below average service outcome report a mean attitude of 2.9.

The 2-way interaction between stereotype and service outcome is significant with an $F_{(df = 2, 189)}$ of 3.72 (p < .05). Independent samples t-tests further examine the interaction between stereotype and service outcome. The difference between a stereotype consistent lawyer (5.3) and stereotype inconsistent lawyer (5.7) is significant in the excellent service outcome $t(62) = -2.2$, p < .05. The difference between a stereotype consistent lawyer (4.3) and stereotype inconsistent lawyer (3.8) is significant in the average service outcome $t(63) = 1.7$, p < .1. The difference between a stereotype consistent lawyer (3.1) and stereotype inconsistent lawyer (2.6) is significant in the below average service outcome $t(64) = 1.7$, p < .1. Table 4.39 displays the univariate GLM results for attitudes, Table 4.40 displays the means for attitudes and Figure 4.6 graphically displays the 2-way interaction. Hypothesis seven is supported because the mean attitude for the stereotype inconsistent lawyer delivering excellent service is significantly higher than the stereotype consistent lawyer delivering excellent service.

Table 4.39

Main Study Lawyer H_7 GLM

	Attitudes		
	df	F	Sig.
Main Effects			
Stereotype	1	2.01	.158
Service Outcome	2	95.68	.000
Two-Way Interaction			
Stereotype x Service Outcome	2	3.72	.026

Table 4.40

Main Study Lawyer H₇ Means

| OUTCOME | Attitudes STEREOTYPE | | |
	Consistent	Inconsistent	Total
Excellent	5.3	5.7	5.5
Average	4.3	3.8	4.1
Below Average	3.1	2.6	2.9
Total	4.3	3.9	4.1
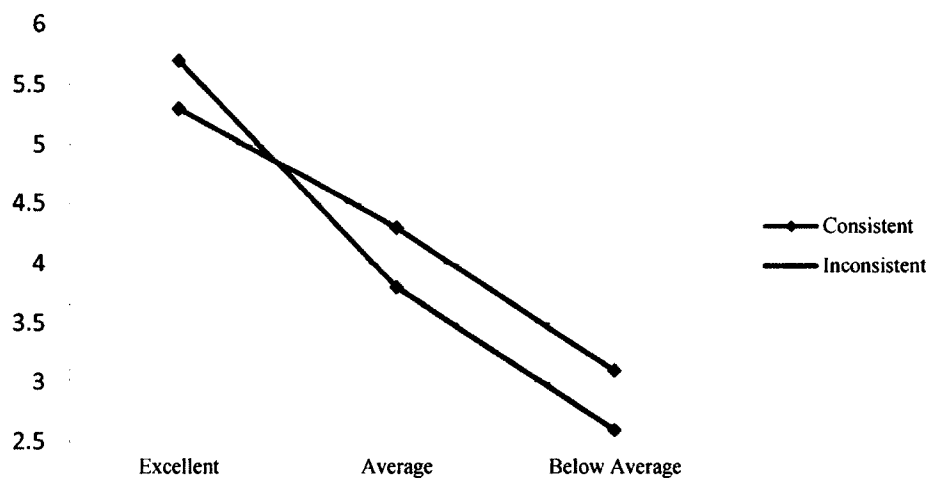
Figure 4.6 *Main Study Lawyer Service Outcome by Stereotype*

To test hypothesis eight a univariate (GLM) is conducted with disconfirmation as the dependent variable and stereotype and innuendo as the experimental variables. The model yields an F $(df = 7, 187, R^2 = .03)$ of .71 (p = .66). The main effect for innuendo is not significant with an F $(df = 3, 187)$ of .59 (p = .62), however, the main effect of stereotype is not significant with an F $(df = 1, 187)$ of .19 (p = .67). Subjects in the competence positive condition report a mean disconfirmation of -.83 and subjects in the competence negative

condition report a mean disconfirmation of -.60. Subjects in the affect positive condition report a mean disconfirmation of -.93 and subjects in the affect negative condition report a mean disconfirmation of -.52. Subjects report a mean disconfirmation of -.77 when exposed to a stereotype consistent lawyer and report a mean disconfirmation of -.67 when exposed to a stereotype inconsistent lawyer. The interaction between innuendo and stereotype is not significant with an F $_{(df = 3, 187)}$ of 1.0 (p = .39). Table 4.41 displays the univariate GLM results for disconfirmation and Table 4.42 displays the means for disconfirmation. Hypothesis eight is not supported because the interaction between innuendo and stereotype is not significant.

Table 4.41

Main Study Lawyer H₈ GLM

	Disconfirmation		
	df	F	Sig.
Main Effects			
Innuendo	3	.59	.624
Stereotype	1	.19	.667
Two-Way Interaction			
Innuendo x Stereotype	3	1.0	.390

Table 4.42

Main Study Lawyer H₈ Means

| | Disconfirmation | | |
| | STEREOTYPE | | |
INNUENDO	Consistent	Inconsistent	Total
Comp Positive	-1.2	-.57	-.83
Comp Negative	-.85	-.41	-.60
Affect Positive	-.71	-1.2	-.93
Affect Negative	-.48	-.60	-.52
Innuendo Total	-.77	-.67	-.72

Hair Stylist

To test hypothesis seven a univariate general linear model (GLM) is conducted with subject attitudes as the dependent variable and stereotype and service outcome as the experimental variables. The model yields an F $_{(df = 5, 179,}$ R^2 = .837) of 184.4 (p < .001). The main effect for stereotype is not significant with an F $_{(df = 1, 179)}$ of 2.5 (p = .116), but the main effect for service outcome is significant with an F $_{(df = 2, 179)}$ of 451.9 (p < .001). Subjects report a mean attitude of 4.7 when exposed to a stereotype consistent hair stylist and a mean attitude of 4.4 when exposed to a stereotype inconsistent hair stylist. Subjects in the excellent service outcome report a mean attitude of 6.4, while subjects in the average service outcome report a mean attitude of 5.3, and subject in the below average service outcome report a mean attitude of 2.0.

The 2-way interaction between stereotype and service outcome is significant with an F $_{(df = 2, 179)}$ of 3.5 (p < .05). Independent samples t-tests further examine the interaction between stereotype and service outcome. The difference between a stereotype consistent hair stylist (5.6) and stereotype inconsistent hair stylist (4.9) is significant in the average service outcome t(59) = 2.75, p < .05. However, the difference between a

stereotype consistent hair stylist (6.4) and stereotype inconsistent hair stylist (6.5) is not significant in the excellent service outcome $t(59) = -.56$, $p = .58$. Additionally, the difference between a stereotype consistent hair stylist (2.1) and stereotype inconsistent hair stylist (2.0) is not significant in the below average service outcome $t(61) = .14$, $p = .89$. Table 4.43 displays the univariate GLM results for attitudes, Table 4.44 displays the means for attitudes, and Figure 4.7 graphically displays the 2-way interaction. Hypothesis seven is not supported because the mean attitude for the stereotype inconsistent hair stylist delivering excellent service in not significantly higher than the stereotype consistent hair stylist delivering excellent service.

Table 4.43

Main Study Hair Stylist H7 GLM

	Attitudes		
	df	F	Sig.
Main Effects			
Stereotype	1	2.5	.116
Service Outcome	2	451.9	.000
Two-Way Interaction			
Stereotype x Service Outcome	2	3.5	.033

Table 4.44

Main Study Hair Stylist H7 Means

	Attitudes		
	STEREOTYPE		
OUTCOME	Consistent	Inconsistent	Total
Excellent	6.4	6.5	6.4
Average	5.6	4.9	5.3
Below Average	2.1	2.0	2.0
Total	4.7	4.4	4.5

Service Outcome by Stereotype
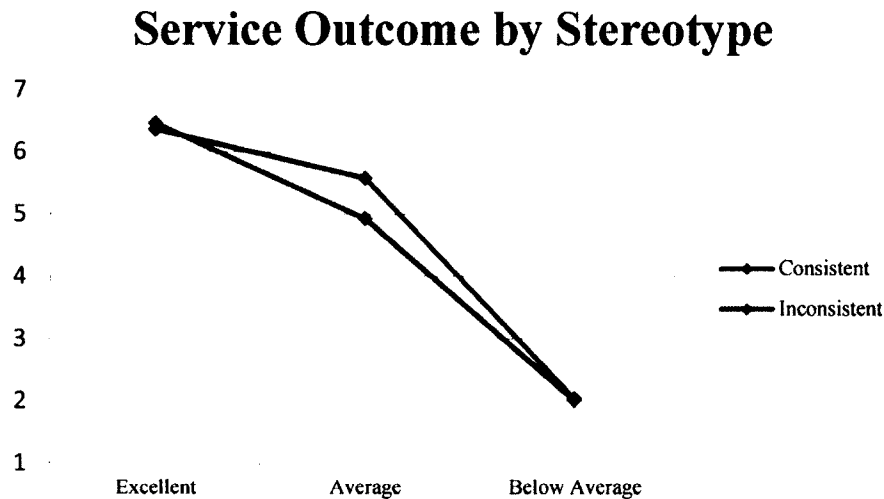
Figure 4.7 *Main Study Hair Stylist Service Outcome by Stereotype*

To test hypothesis eight a univariate (GLM) is conducted with disconfirmation as the dependent variable and stereotype and innuendo as the experimental variables. The model yields an F (df = 7, 177, R^2 = .12) of 3.28 (p < .05). The main effects for innuendo and stereotype are significant with an F (df = 3, 177) of 2.32 (p < .1) and an F (df = 1, 177) of 11.87 (p < .05), respectively. Subjects in the competence positive innuendo condition report a mean disconfirmation of -1.4 and subjects in the competence negative innuendo condition report a mean disconfirmation of -.52. Subjects in the affect positive innuendo condition report a mean disconfirmation of -.36 and subjects in the affect negative innuendo condition report a mean disconfirmation of -.35. Subjects report a mean disconfirmation of -1.2 when exposed to a stereotype consistent hair stylist and a mean disconfirmation of -.07 when exposed to a stereotype inconsistent hair stylist. The interaction between innuendo and stereotype is not significant with an F (df = 3, 177) of .75 (p = .523). Table 4.45 displays the univariate GLM results for disconfirmation and

Table 4.46 displays the means for disconfirmation. Hypothesis eight is not supported because the interaction between innuendo and stereotype is not significant.

Table 4.45

Main Study Hair Stylist H_8 GLM

	Disconfirmation		
	df	F	Sig.
Main Effects			
Innuendo	3	2.32	.077
Stereotype	1	11.87	.001
Two-Way Interaction			
Innuendo x Stereotype	3	.75	.523

Table 4.46

Main Study Hair Stylist H_8 Means

	Disconfirmation		
	STEREOTYPE		
INNUENDO	Consistent	Inconsistent	Total
Comp Positive	-2.06	-.48	-1.4
Comp Negative	-1.18	-.00	-.52
Affect Positive	-.84	.37	-.36
Affect Negative	-.49	-.19	-.35
Innuendo Total	-1.2	-.07	-.67

Nail Technician

To test hypothesis seven a univariate general linear model (GLM) is conducted with subject attitudes as the dependent variable and stereotype and service outcome as the experimental variables. The model yields an F $(df = 5, 148, R^2 = .66)$ of 57.81 (p < .001). The main effect for stereotype is not significant with an F $(df = 1, 148)$ of .78 (p = .380), but the main effect for service outcome is significant with an F $(df = 2, 148)$ of 129.4 (p < .001). Subjects report a mean attitude of 4.7 when exposed to a stereotype consistent nail

technician and report a mean attitude of 4.0 when exposed to a stereotype inconsistent nail technician. Subjects in the excellent service outcome report a mean attitude of 6.1, while subjects in the average service outcome report a mean attitude of 4.2, and subject in the below average service outcome report a mean attitude of 2.5. The 2-way interaction between stereotype and service outcome is not significant with an F $_{(df = 2, 148)}$ of .49 (p = .615). Table 4.47 displays the univariate GLM results for attitudes and Table 4.48 displays the means for attitudes. Hypothesis seven is not supported because the interaction between stereotype and service outcome is not significant.

Table 4.47

Main Study Nail Technician H_7 GLM

	Attitudes		
	df	F	Sig.
Main Effects			
Stereotype	1	.78	.380
Service Outcome	2	129.39	.000
Two-Way Interaction			
Stereotype x Service Outcome	2	.488	.615

Table 4.48

Main Study Nail Technician H_7 Means

	Attitudes		
	STEREOTYPE		
OUTCOME	Consistent	Inconsistent	Total
Excellent	6.1	6.1	6.1
Average	4.2	4.2	4.2
Below Average	2.8	2.4	2.5
Total	4.7	4.0	4.3

To test hypothesis eight a univariate (GLM) is conducted with disconfirmation as the dependent variable and stereotype and innuendo as the experimental variables. The model yields an F $(df = 7, 146, R^2 = .12)$ of 2.8 (p < .01). The main effect for innuendo is significant with an F $(df = 3, 146)$ of 3.72 (p < .05), however, the main effect of stereotype is not significant with an F $(df = 1, 146)$ of .016 (p = .9). Subjects in the competence positive innuendo condition report a mean disconfirmation of -1.22 and subjects in the competence negative innuendo condition report a mean disconfirmation of -.10. Subjects in the affect positive innuendo condition report a mean disconfirmation of -.74 and subjects in the affect negative innuendo condition report a mean disconfirmation of .19. Subjects report a mean disconfirmation of -.43 when exposed to a stereotype consistent nail technician and report a mean disconfirmation of -.51 when exposed to a stereotype inconsistent nail technician.

The interaction between innuendo and stereotype is significant with an F $(df = 3, 146)$ of 2.87 (p < .05). Independent samples t-tests further examine the interaction between innuendo and stereotype. The difference between a stereotype consistent nail technician (-1.3) and stereotype inconsistent nail technician (-1.2) is not significant in the competence positive innuendo condition t(36) = -0.11, p = .91. The difference between a stereotype consistent nail technician (.57) and stereotype inconsistent nail technician (-.49) is significant in the competence negative innuendo condition t(39) = 1.7, p < .1. The difference between a stereotype consistent nail technician (-1.4) and stereotype inconsistent nail technician (.09) is significant in the affect positive innuendo condition t(37) = -2.7, p < .05. The difference between a stereotype consistent nail technician (.51) and stereotype inconsistent nail technician (-.14) is not significant in the affect negative

innuendo condition t(34) = .85, p = .40. Table 4.49 displays the univariate GLM results for disconfirmation and Table 4.50 displays the means for disconfirmation. Hypothesis eight is not supported because the mean disconfirmation for the stereotype inconsistent nail technician in the affect positive condition is significantly higher, not lower, than the stereotype consistent nail technician in the affect positive condition (Figure 4.8).

Table 4.49

Main Study Nail Technician H8 GLM

	Disconfirmation		
	df	F	Sig.
Main Effects			
Innuendo	3	3.72	.013
Stereotype	1	.016	.900
Two-Way Interaction			
Innuendo x Stereotype	3	2.87	.039

Table 4.50

Main Study Nail Technician H8 Means

	Disconfirmation		
	STEREOTYPE		
INNUENDO	Consistent	Inconsistent	Total
Comp Positive	-1.27	-1.19	-1.22
Comp Negative	.57	-.49	-.10
Affect Positive	-1.38	.09	-.74
Affect Negative	.51	-.14	.19
Innuendo Total	-.43	-.51	-.47

Innuendo by Stereotype
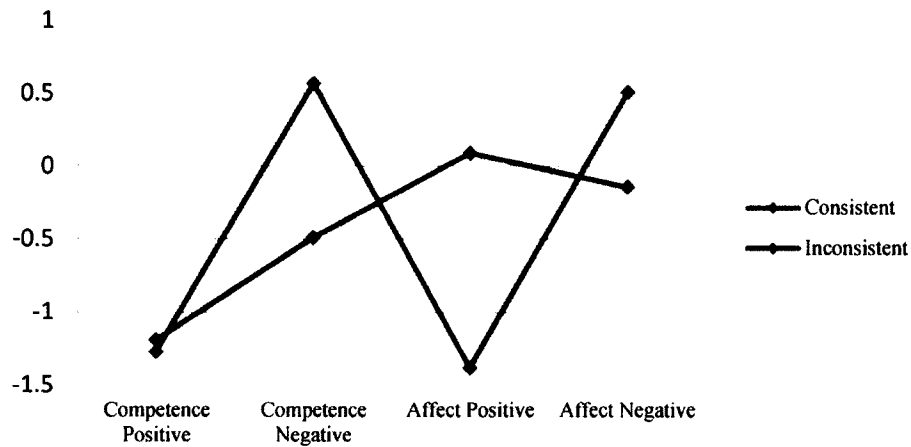
Figure 4.8 *Main Study Nail Technician Innuendo by Stereotype*

Part Three: Overall Conclusion

Hypothesis seven is supported for the lawyer, showing that a stereotypically inconsistent lawyer delivering excellent service is evaluated more positively than a stereotypically consistent lawyer delivering excellent service. Hypothesis seven is not supported for the doctor, hair stylist, or nail technician. Hypothesis eight is not supported for the doctor, lawyer, hair stylist, or nail technician. Table 4.51 provides finding for hypotheses seven and eight for all four service providers.

Table 4.51

Main Study All Service Providers H7 and H8

	Hypothesis 7 Supported	Hypothesis 8 Supported
Doctor	No	No
Lawyer	Yes	No
Hair Stylist	No	No
Nail Technician	No	No

Part Four: Research Question 4b

Part four centers on Research Question 4b. Research Question 4b focuses on the cognitive and affective effects when service providers are affected by the innuendo, stereotype influence, and/or various service outcomes. Hypothesis nine states that a subject with a negative disconfirmation will be rated lower in satisfaction than a subject with a positive or neutral disconfirmation (a subject with a positive or neutral disconfirmation will receive higher satisfaction judgments than a subject with a negative disconfirmation). Hypothesis ten states that perceived quality is expected to mediate the relationship between disconfirmation and satisfaction. Hypothesis eleven states that a positive disconfirmation will result in positive behavioral intentions when the positive disconfirmation results from schema congruity (a negative disconfirmation will result in negative behavioral intentions when the negative disconfirmation results from schema incongruity). Hypothesis twelve states that a negative disconfirmation will result in a greater number of descriptive traits being recalled than a positive disconfirmation.

Doctor

To test hypothesis nine a univariate (GLM) is conducted with satisfaction as the dependent variable, innuendo, stereotype, and service outcome as the experimental variables, and disconfirmation as a covariate. The model yields an F $(_{df = 24, 156}, R^2=.71)$ of 15.674 (p < .001). Disconfirmation is significant with an F $(_{df = 1, 156})$ of 8.68 (p < .01, b = .11). Hypotheses nine is supported as shown by the positive slope coefficient. Table 4.52 displays the univariate GLM results for satisfaction.

Table 4.52

Main Study Doctor H₉ GLM

	Satisfaction		
	df	F	Sig.
Innuendo	3	2.13	.099
Stereotype	1	5.70	.018
Service Outcome	2	35.04	.000
Disconfirmation	1	8.68	.004

To test hypothesis ten a series of regression equations are used. The first linear regression equation with satisfaction as the dependent variable and disconfirmation as the independent variable, showing that disconfirmation is correlated with satisfaction, yields an F $_{(df = 1,179)}$ of 135.92 (β = .66, p < .001). This provides evidence that there is an effect that may be mediated. The second linear regression equation with quality as the dependent variable and disconfirmation as the independent variable, showing that disconfirmation is correlated with quality, the mediator, yields an F $_{(df = 1,179)}$ of 129.69 (β = .65, p < .001). The third linear regression equation with satisfaction as the dependent variable and quality as the independent variable, showing that quality affects satisfaction, yields an F $_{(df = 1, 179)}$ of 1,858.22 (β = .96, p < .001). To establish the effect of mediation, disconfirmation must be controlled in establishing the effect of quality on satisfaction. Using multiple regression with satisfaction as the dependent variable and disconfirmation and quality as the independent variables produces an F $_{(df = 2, 178,}$ R^2=.96) of 953.32 (p < .001). Because disconfirmation is still significant (t = 2.27, p < .05, β=.07) when quality is controlled (t = 31.73, p < .001, β=.91), the finding supports partial mediation of the disconfirmation - satisfaction relationship by quality. Hypothesis ten is supported with partial mediation (See Figure 4.9).

Note. * P < .05, ** p < .01, ***P < .001

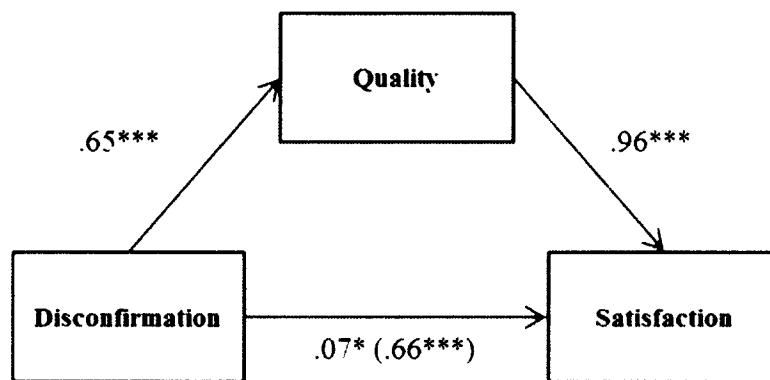Figure 4.9 *Main Study Doctor Mediation*

To test hypothesis eleven H_{11} a univariate (GLM) is conducted with behavioral intentions as the dependent variable, innuendo, stereotype, and service outcome as the experimental variables, and disconfirmation as the covariate. The model yields an F $(df = 24, 156, R^2=.74)$ of 18.21 (p < .001). Disconfirmation is significant with an F $(df = 1, 156)$ of 11.77 (p < .01, b = 4.6). Hypotheses eleven is supported as shown by the positive slope coefficient. Table 4.53 displays the univariate GLM results for behavioral intentions.

Table 4.53

Main Study Doctor H_{11} GLM

	Behavioral Intentions		
	df	F	Sig.
Innuendo	3	2.24	.086
Stereotype	1	6.97	.009
Service Outcome	2	38.04	.000
Disconfirmation	1	11.77	.001

To test hypothesis twelve an independent samples t-test is used to compare the average number of traits recalled between subjects with a positive disconfirmation and subjects with a negative disconfirmation. The difference between subjects with a positive

disconfirmation (5.5) and subjects with a negative disconfirmation (5.4) is not significant

$t(176) = .30$, $p = .76$. Hypothesis twelve is not supported as shown by the nonsignificant

t-test.

Lawyer

To test hypothesis nine a univariate (GLM) is conducted with satisfaction as the

dependent variable, innuendo, stereotype, and service outcome as the experimental

variables, and disconfirmation as a covariate. The model yields an F $(df = 24, 170, R^2 = .73)$

of 19.3 ($p < .001$). Disconfirmation is significant with an F $(df = 1, 170)$ of 29.4 ($p < .01$, b =

.21). Hypotheses nine is supported as shown by the positive slope coefficient. Table

4.54 displays the univariate GLM results for satisfaction.

Table 4.54

Main Study Lawyer H9 GLM

	Satisfaction		
	df	F	Sig.
Innuendo	3	4.8	.003
Stereotype	1	8.2	.005
Service Outcome	2	24.4	.000
Disconfirmation	1	29.4	.000

To test hypothesis ten a series of regression equations are used. The first linear

regression equation with satisfaction as the dependent variable and disconfirmation as the

independent variable, showing that disconfirmation is correlated with satisfaction, yields

an F $(df = 1,193)$ of 244.29 ($\beta = .75$, $p < .001$). This provides evidence that there is an effect

that may be mediated. The second linear regression equation with quality as the

dependent variable and disconfirmation as the independent variable, showing that

disconfirmation is correlated with quality, the mediator, yields an F $(df = 1,193)$ of 226.81 (β

= .74 p < .001). The third linear regression equation with satisfaction as the dependent variable and quality as the independent variable, showing that quality affects satisfaction, yields an F $_{(df = 1, 193)}$ of 1556.74 (β = .94, p < .001). To establish the effect of mediation, disconfirmation must be controlled in establishing the effect of quality on satisfaction. Using multiple regression with satisfaction as the dependent variable and disconfirmation and quality as the independent variables produces an F $_{(df = 2, 192,}$ R^2=.95) of 827.69 (p < .001). Because disconfirmation is still significant (t = 3.43, p < .01, β=.12) when quality is controlled (t = 24.97, p < .001, β=.86), the finding supports partial mediation of the disconfirmation - satisfaction relationship by quality. As shown in Figure 4.10, hypothesis ten is supported with partial mediation.

Note. * P < .05. ** p < .01. ***P < .001

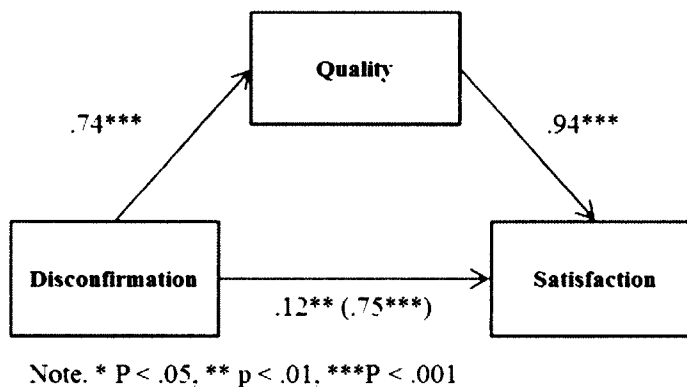Figure 4.10 *Main Study Lawyer Mediation*

To test hypothesis eleven a univariate (GLM) is conducted with behavioral intentions as the dependent variable, innuendo, stereotype, and service outcome as the experimental variables, and disconfirmation as the covariate. The model yields an F $_{(df =}$ $_{24, 170,}$ R^2=.75) of 21.28 (p < .001). Disconfirmation is significant with an F $_{(df = 1, 170)}$ of

31.36 (p < .001, b = 7.6). Hypotheses eleven is supported as shown by the positive slope coefficient. Table 4.55 displays the univariate GLM results for behavioral intentions.

Table 4.55

Main Study Lawyer H$_{11}$ GLM

	Behavioral Intentions		
	df	F	Sig.
Innuendo	3	4.58	.004
Stereotype	1	7.4	.007
Service Outcome	2	26.12	.000
Disconfirmation	1	31.36	.000

To test hypothesis twelve an independent samples t-test is used to compare the average number of traits recalled between subjects with a positive disconfirmation and subjects with a negative disconfirmation. The difference between subjects with a positive disconfirmation (5.8) and subjects with a negative disconfirmation (5.3) is significant t(191) = 1.9, p < .1. Hypothesis twelve is not supported because subjects with a negative disconfirmation recalled significantly less traits, not more traits, than subjects with a positive disconfirmation.

Hair Stylist

To test hypothesis nine a univariate (GLM) is conducted with satisfaction as the dependent variable, innuendo, stereotype, and service outcome as the experimental variables, and disconfirmation as a covariate. The model yields an F (df = 24, 160, R^2=.89) of 53.426 (p < .001). Disconfirmation is significant with an F (df = 1, 160) of 8.59 (p < .01, b = .08). Hypotheses nine is supported as shown by the positive slope coefficient. Table 4.56 displays the univariate GLM results for satisfaction.

Table 4.56

Main Study Hair Stylist H9 GLM

	Satisfaction		
	df	F	Sig.
Innuendo	3	.397	.755
Stereotype	1	7.80	.006
Service Outcome	2	90.26	.000
Disconfirmation	1	8.59	.004

To test hypothesis ten a series of regression equations are used. The first linear regression equation with satisfaction as the dependent variable and disconfirmation as the independent variable, showing that disconfirmation is correlated with satisfaction, yields an F (df = 1,183) of 318.12 (β = .80, p < .001). This provides evidence that there is an effect that may be mediated. The second linear regression equation with quality as the dependent variable and disconfirmation as the independent variable, showing that disconfirmation is correlated with quality, the mediator, yields an F (df = 1,183) of 325.45 (β = .80, p < .001). The third linear regression equation with satisfaction as the dependent variable and quality as the independent variable, showing that quality affects satisfaction, yields an F (df = 1, 183) of 4061.20 (β = .98, p < .001). To establish the effect of mediation, disconfirmation must be controlled in establishing the effect of quality on satisfaction. Using multiple regression with satisfaction as the dependent variable and disconfirmation and quality as the independent variables produces an F (df = 2, 182, R^2=.96) of 2047.07 (p < .001). Because disconfirmation is no longer significant (t = 1.54, p =.125, β=.04) when quality is controlled (t = 37.14, p < .001, β=.95), the finding supports full mediation of the disconfirmation - satisfaction relationship by quality. As shown in Figure 4.11, hypothesis ten is supported with full mediation.

Note. * P < .05, ** p < .01, ***P < .001

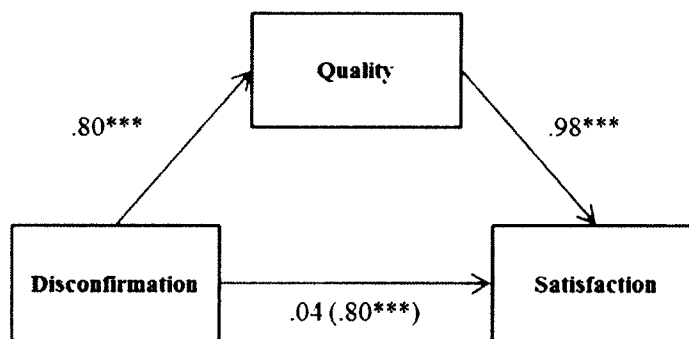Figure 4.11 *Main Study Hair Stylist Mediation*

To test hypothesis eleven a univariate (GLM) is conducted with behavioral intentions as the dependent variable, innuendo, stereotype, and service outcome as the experimental variables, and disconfirmation as the covariate. The model yields an F (df = 24, 160, R^2=.77) of 21.82 (p < .001). Disconfirmation is significant with an F (df = 1, 160) of 4.3 (p < .05, b = 3.55). Hypotheses eleven is supported as shown by the positive slope coefficient. Table 4.57 displays the univariate GLM results for behavioral intentions.

Table 4.57

Main Study Hair Stylist H_{11} GLM

	Behavioral Intentions		
	df	F	Sig.
Innuendo	3	1.43	.237
Stereotype	1	1.26	.264
Service Outcome	2	34.94	.000
Disconfirmation	1	4.31	.039

To test hypothesis twelve an independent samples t-test is used to compare the average number of traits recalled between subjects with a positive disconfirmation and

subjects with a negative disconfirmation. The difference between subjects with a positive disconfirmation (5.0) and subjects with a negative disconfirmation (5.1) is not significant $t(173) = -.45$, $p = .66$. Hypothesis twelve is not supported as shown by the nonsignificant t-test.

Nail Technician

To test hypothesis nine a univariate (GLM) is conducted with satisfaction as the dependent variable, innuendo, stereotype, and service outcome as the experimental variables, and disconfirmation as a covariate. The model yields an F $(_{df = 24, 129}, R^2=.79)$ of 20.0 ($p < .001$). Disconfirmation is significant with an F $(_{df = 1, 129})$ of 8.99 ($p < .01$, $b = .11$). Hypotheses nine is supported as shown by the positive slope coefficient. Table 4.58 displays the univariate GLM results for satisfaction.

Table 4.58

Main Study Nail Technician H9 GLM

	Satisfaction		
	df	F	Sig.
Innuendo	3	2.8	.043
Stereotype	1	.81	.371
Service Outcome	2	35.74	.000
Disconfirmation	1	8.99	.003

To test hypothesis ten a series of regression equations are used. The first linear regression equation with satisfaction as the dependent variable and disconfirmation as the independent variable, showing that disconfirmation is correlated with satisfaction, yields an F $(_{df = 1,152})$ of 183.9 ($\beta = .74$, $p < .001$). This provides evidence that there is an effect that may be mediated. The second linear regression equation with quality as the dependent variable and disconfirmation as the independent variable, showing that

disconfirmation is correlated with quality, the mediator, yields an $F_{(df = 1,152)}$ of 138.61 (β = .69, p < .001). The third linear regression equation with satisfaction as the dependent variable and quality as the independent variable, showing that quality affects satisfaction, yields an $F_{(df = 1, 152)}$ of 1031.70 (β = .93, p < .001). To establish the effect of mediation, disconfirmation must be controlled in establishing the effect of quality on satisfaction. Using multiple regression with satisfaction as the dependent variable and disconfirmation and quality as the independent variables produces an $F_{(df = 2, 152}$, R^2=.94) of 604.11 (p < .001). Because disconfirmation is still significant (t = 4.85, p < .001, β=.18) when quality is controlled (t = 21.54, p < .001, β=.80), the finding supports partial mediation of the disconfirmation - satisfaction relationship by quality. As shown in Figure 4.12, hypothesis ten is supported with partial mediation.
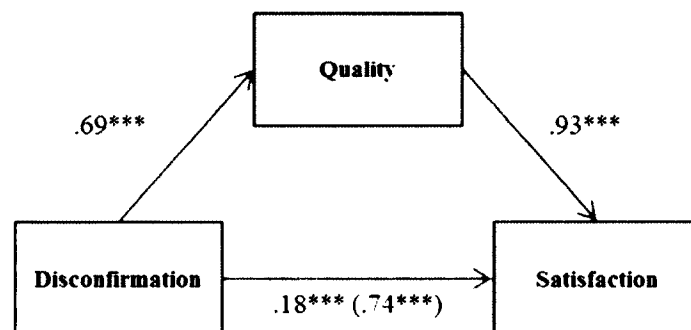
Note. * P < .05. ** p < .01. ***P < .001

Figure 4.12 *Main Study Nail Technician Mediation*

To test hypothesis eleven a univariate (GLM) is conducted with behavioral intentions as the dependent variable, innuendo, stereotype, and service outcome as the experimental variables, and disconfirmation as the covariate. The model yields an $F_{(df = 24, 129}$, R^2=.84) of 28.58 (p < .001). Disconfirmation is significant with an $F_{(df = 1, 129)}$ of

23.16 (p < .001, b = 5.7). Hypothesis eleven is supported as shown by the positive slope coefficient. Table 4.59 displays the univariate GLM results for behavioral intentions.

Table 4.59

Main Study Nail Technician H_{11} GLM

	Behavioral Intentions		
	df	F	Sig.
Innuendo	3	4.3	.006
Stereotype	1	5.3	.023
Service Outcome	2	35.7	.000
Disconfirmation	1	23.164	.000

To test hypothesis twelve an independent samples t-test is used to compare the average number of traits recalled between subjects with a positive disconfirmation and subjects with a negative disconfirmation. The difference between subjects with a positive disconfirmation (4.6) and subjects with a negative disconfirmation (4.9) is not significant t(148) = -.84, p = .41. Hypothesis twelve is not supported as shown by the nonsignificant t-test.

Part Four: Overall Conclusion

Hypothesis nine is supported for the doctor, lawyer, hair stylist, and nail technician. Subjects with a negative disconfirmation rate the service provider lower in satisfaction than subjects with a positive or neutral disconfirmation. Hypothesis ten is supported for the doctor, lawyer, hair stylist, and nail technician. Hypothesis eleven is supported for the doctor, lawyer, hair stylist, and nail technician. Subjects with a positive disconfirmation report significantly more positive behavioral intentions. Hypothesis

twelve is not supported for the doctor, lawyer, hair stylist, or nail technician. Table 4.60

provides finding for hypotheses nine through twelve for all four service providers.

Table 4.60

Main Study All Service Providers H_9 through H_{12}

	Hypothesis 9 Supported	Hypothesis 10 Supported	Hypothesis 11 Supported	Hypothesis 12 Supported
Doctor	**Yes**	**Partial**	**Yes**	**No**
Lawyer	**Yes**	**Partial**	**Yes**	**No**
Hair Stylist	**Yes**	**Full**	**Yes**	**No**
Nail Technician	**Yes**	**Partial**	**Yes**	**No**

CHAPTER 5

SUMMARY AND CONCLUSIONS

This chapter consists of four sections. The first section provides a discussion of the research questions posed, the hypotheses tested, and the results of the experiments. The second section discusses the theoretical contributions and the managerial implications of the dissertation. The third section provides the limitations of each study while the fourth section discusses directions for future research.

Innuendo Study

The primary objective of the innuendo study was to confirm placement of four service provider types in the proposed Service Provider Perception Framework (SPPF) and examine how consumers' perceptions of service providers changed when subjects were provided incomplete information regarding only one dimension of the SPPF.

Research Question 1

Research Question 1 focuses on the categorization of service providers based on the dimensions of competence and affect and how those categories are predictive of service outcomes in some way. Literature on the classification of services began with Judd (1964) who classified services by rented goods services, owned goods services, and nongoods services. In 1999, Cook, Goh, and Chung identified thirty nine different service typologies in which little synthesis and integration was found. Service

classification schemas include but are not limited to identifying or quantifying services and/or goods and service (Kellogg and Chase 1995; Lovelock 1983; Shostack 1977; Silvestro, Fitzgerald, and Johnston 1992), service strategy (Bowen 1990; Lovelock 1983), service design (Bowen 1990; Haywood-Farmer 1988; Shostack 1987), and service system efficiency (Mersha 1990), among others (see Cook, Goh, and Chung 1999 for a comprehensive list).

Mills and Marguiles (1980) created a classification scheme centered on service organizations incorporating both service providers and customers, however the listed service organizations do not completely cover the mentioned interface variables, and the service provider can potentially fall into more than one alternative type of organization (Larsson and Bowen 1989; Snyder, Cox, and Jesse 1982). A new service typology is needed to define the attributes of service providers and those attributes that differentiate service providers, despite the organization to which they belong. Thus, the proposed *Service Provider Perception Framework* seeks to extend the services literature by offering a classification scheme using person perception theory, which categorizes the service provider on two dimensions (competence and affect) (see Figure 2.10).

Research Question 1 is examined through a series of three pretests and confirmed with the innuendo study. The findings provide support for the categorization of service providers using the SPPF. Consistent placement of each service provider within the SPPF from each pretest and the innuendo study demonstrates that subjects' ratings of the measured trait items effectively categorizes service providers on the dimensions of competence and affect and further validates use of the SPPF.

The categories of the SPPF are predictive of service outcomes in multiple ways. Consistent placement of each service provider in the SPPF across three pretests and the innuendo study demonstrates the level of uniformity of consumers' perceptions of each service provider. In each of the three pretests subjects are not provided a scenario surrounding the service provider for which to base their perception of the individual. Subjects are provided no information regarding the specific individual providing the service, but make their evaluations based on their perception of the entire service provider category. In the innuendo study, subjects are provided a short stereotype consistent complete description regarding the service provider.

Additionally, the movement within and between quadrants of the SPPF when subjects are provided incomplete information demonstrates that consumers change their perceptions surrounding the service provider given limited information. In the pretests and the complete condition of the innuendo study subjects are provided no information or complete information and remain in the same location of the SPPF. When subjects are introduced to the service provider with incomplete information changes occur in the perception of the service providers level of competence and/or affect.

The findings for hypotheses one through six demonstrate a change in perception of the service provider on the provided dimension and the omitted dimension. The results indicate that a service provider located in quadrant I in the complete condition (positive competence/positive affect) moves diagonally across the framework to quadrant III when provided incomplete inconsistent information on the affect dimension. Additionally, a service provider located in quadrant III in the complete condition (negative competence/negative affect) moves diagonally across the framework to

quadrant I when provided incomplete consistent information on the competence dimension. Thus, it is shown that significant shifts can occur when subjects are provided either consistent or inconsistent information on only one dimension. This change demonstrates that consumers fully change their perception of the service provider from being entirely positive (negative) to completely negative (positive). For a consumer to have the opposite opinion on the level of competence and affect for the service provider based on a short incomplete scenario, it is inevitable that the consumers' expectations regarding the level of service to be rendered will also change.

Research Question 2

Research Question 2 focuses on the movement within and between quadrants of the SPPF when subjects are presented with incomplete information on only one SPPF dimension. Essentially, this research question evaluates how the placement of the service provider changes in the SPPF when provided incomplete information. Once again, movement is the term used to describe a change in the placement of the service provider in the SPPF from the complete condition to one of the four incomplete conditions. While a change in placement occurs on both the competence and affect dimension, the movement in Research Question 2 is assessed on only the provided dimension. The literature indicates that a schema serves as a knowledge base for consumers to interpret information, actions, and expectations (Graesser, Woll, Kowalski, and Smith 1980; Rumelhart and Ortony 1977). Thus, the schema serves as a stored framework of cognitive knowledge representing information about a specific stimulus (service provider), including the attributes and the relationship between attributes (Fiske and Linville 1980).

According to Mandler (1982), schema congruity leads to favorable outcomes because of the confirmation between the object and associated expectations. Incongruity can be viewed as moderate or extreme, each resulting in different outcomes. Moderate incongruity is viewed as "interesting and positively valued" (Mandler 1982, p.22) while extreme incongruity cannot be resolved or will be resolved only if fundamental changes are made to the existing cognitive structure. One potential path for extreme incongruity is accommodation, in which the resultant outcome will be "intensely positive or negative, depending...on the current state of evaluation" (Mandler 1982, p. 24). In a service context, it is not guaranteed that the service provider a consumer seeks or interacts with will fit the associated schema the consumer holds. Thus, the consumer may engage in greater cognitive elaboration to resolve the incongruity between the service provider and the schema.

The innuendo study results evaluate the schema associated with each service provider in two hypotheses. Hypothesis one evaluates schema congruent dimension information and hypothesis two evaluates schema incongruent dimension information. Findings indicate that a significant shift in the direction of the consistency (congruity) does not occur for each service provider when subjects are exposed to stereotype consistent information on only one dimension of the SPPF (H_1), however a significant shift in the direction of the inconsistency (incongruity) does occur for each service provider when subjects are exposed to stereotype inconsistent information on only one dimension of the SPPF (H_2).

When subjects were provided incomplete stereotype consistent (congruent) information on either the competence or affect dimension, significant movement on the

provided dimension in the direction of the consistency depended on the scenario subjects read. Quadrant I is consistent with Mandler (1982) in that a favorable (stereotype consistent) outcome is shown when subjects are provided positive competence or positive affect dimension information. Additionally, quadrant II is consistent with Mandler (1982) in that a favorable (stereotype consistent) outcome is shown when subjects are provided negative affect dimension information.

One explanation for the lack of support for schema congruity on the competence dimension in quadrant II and both the competence and affect dimensions for quadrants III and IV is that subjects cannot rate the service provider significantly more extreme in the consistent direction without altering the associated schema. In the complete condition of quadrant IV, the service provider is rated negative on the competence dimension and negative on the affect dimension. Given incomplete stereotype consistent information subjects actually rate the service provider as being slightly more positive on both dimensions. Subjects may view the incomplete dimension information as less negative when considered alone than when complete dimension information is given. Conversely, if subjects were to perceive the service provider as being more negative, the associated category schema might change to reflect a different type of service provider, or a service provider that subjects would not patronize, thus eliminating the provider from the SPPF.

When subjects were provided incomplete stereotype inconsistent (incongruent) information on either the competence or affect dimension, significant movement occurred on the provided dimension in the direction of the inconsistency. Subjects responding to stereotypically inconsistent information on one dimension of the SPPF create cognitive elaboration and work to restructure or make accommodations to the cued schema. The

results are consistent with Mandler (1982), indicating that when subjects were presented with a service provider not matching the stored schema, subjects rate the service provider more extreme in the incongruent direction. Because subjects are told the profession of the individual, and the information provided is not out of the realm of possibility for the provider, it appears that accommodation is successful. Thus, the outcome is significantly positive or negative, based on the placement of the service provider in the complete condition.

The ability for movement within and between quadrants of the SPPF is greater for incongruent information than congruent information. Regardless of the quadrant location for the complete condition, a favorable outcome for incomplete schema congruent information can only move within the associated quadrant. However, the service provider can move within the associated quadrant or between quadrants to the opposing dimension view when presented with schema incongruent information. For example, a service provider placed in quadrant IV for the complete condition indicates the service provider is viewed as negative (low) on the competence dimension and positive (high) on the affect dimension. When provided schema congruent information on the competence or affect dimension, the service provider can only move further into quadrant IV showing a lower level of competence or a higher level of affect. When provided schema incongruent information on the competence dimension, the service provider can be viewed with more competence within quadrant IV or the service provider can move between quadrants on the competence dimension to quadrant I. The same is true on the affect dimension; the service provider can be viewed with less affect within quadrant IV

or the service provider can move between quadrants on the affect dimension to quadrant III.

Research Question 3

Research Question 3 focuses on the applicability of the innuendo effect on consumers' perceptions of service providers. Literature on the innuendo effect indicates the listeners draw negative conclusions when provided positive information on either the competence or the warmth dimension, but not both (Abele and Wojciszke 2007; Fiske, Cuddy, and Glick 2007). Studying the innuendo effect in services marketing requires an adaption of subjects drawing negative conclusions on the omitted dimension when being provided with positive information on the given dimension. Quadrant I is the only quadrant of the SPPF in which consumers rate the service provider positive (high) on both the competence and affect dimension. In each of the remaining three quadrants, the service provider is rated negative (low) on at least one dimension. Thus, it is necessary to modify the original innuendo effect for applicability purposes. For the current research, the innuendo effect is found when subjects read incomplete stereotype consistent information on one dimension and rate the service provider significantly different from the complete condition in the stereotypically inconsistent direction on the omitted dimension.

The findings provide support for the occurrence of the innuendo effect in all service provider scenarios when subjects are provided stereotype consistent information on the competence dimension, thus rating the service provider as stereotypically inconsistent with respect to absolute affect and relative likeability compared to the complete condition.

The resulting outcome for service providers located in quadrants II and III of the SPPF is a positive value associated with absolute affect and relative likeability when provided stereotype consistent information on the competence dimension. However, the resulting outcome for service providers located in quadrants I and IV of the SPPF is a negative value associated with absolute affect and relative likability when provided stereotype consistent information on the competence dimension.

The findings provide support for the occurrence of the innuendo effect in the lawyer scenario when subjects are provided stereotype consistent information on the affect dimension, thus rating the service provider as stereotypically inconsistent on the competence dimension. The innuendo effect is not found for the Doctor, Hair Stylist, or Nail Technician scenarios when subjects are provided stereotype consistent information on the affect dimension.

Lack of support for the innuendo effect in three out of the four scenarios can potentially be explained in multiple ways. First, the innuendo effect may not have occurred on the omitted competence dimension because of the significance of the competence dimension in a service encounter. While the relational component of a social exchange adds actual value to overall service quality, this relational component cannot be a substitute for a strong core service (Crosby and Stephens 1987). Kervyn et al (2012) expected to find the strongest innuendo effects when subjects were provided positive information on the non-salient dimension of the situational context, indicating that subjects would draw a negative conclusion on the salient dimension. In their study, subjects were evaluating an individual for membership in a particular group. Results

indicate that the innuendo effect was found on the omitted dimension regardless of the situational context.

The current research differs in context from that of Kervyn et al (2012), in that subjects are evaluating service providers on the salient dimension (competence) with regards to the service provider providing a service to the subject. If subjects were to conclude that the service provider is stereotype inconsistent on the competence dimension, the result could have a direct negative effect on the subject when the service provider performs the service.

Second, and competing with the innuendo effect, subjects may use the "halo effect" when evaluating only one dimension of the service provider. The halo effect dictates that individuals have a tendency to "think of a person in general as rather good or rather inferior and to color the judgment of the separate qualities by this feeling" (Thorndike 1920, p. 25). Research indicates that both competence and warmth are fundamental to social perception (Abele, Cuddy, Judd and Yzerbyt 2008; Fiske et al 2007; Judd, James-Hawkins, Yzerbyt and Kashima 2005; Wojciszke, Bazinska and Jaworski 1998). If this is true, subjects are likely to draw stereotype consistent conclusions regardless of the provided information, or amount of information received to maintain the balance of social perception with respect to the specific service provider.

Lastly, the innuendo effect could be found when analyzed using a different rationale. Currently, the innuendo effect is determined to occur when subjects draw stereotype inconsistent conclusions on the omitted dimension when provided stereotype consistent information. An alternative evaluation, and consistent with the original innuendo effect research, could be to conclude that the innuendo effect occurs when

subjects draw negative conclusions on the omitted dimension when provided positive dimension information, regardless of the placement of the complete condition in the SPPF. Additionally, the innuendo effect could be evaluated in the reverse of the current study in which subjects draw stereotype consistent conclusions on the omitted dimension when provided stereotype inconsistent information. The two listed alternative methods for examining the innuendo effect are not exhaustive of all possibilities of examination, but do provide potential explanations as to why the innuendo effect is not fully supported with the data.

Main Study

The primary objective of the main study was to evaluate the disconfirmation that occurs between consumers' expectations and the service providers' actual performance, as well as cognitive and affective effects when service providers are affected by the innuendo, stereotype influences, and/or various service outcomes.

Research Question 4 (a)

Research Question 4a focuses on the extent of the expected disconfirmation when service providers are affected by an innuendo, stereotype influence, and/or various service outcomes. According to the expectancy-violation theory (Jussim, Coleman, and Lerch 1986; Jackson, Sullivan and Hodge 1993) individuals in violation of the expectations for the selected group will be evaluated more extremely (in the direction of the violation) than individuals not in violation of the group's expectations.

Evaluation of stereotype consistent and stereotype inconsistent service providers delivering excellent, average, or below average service results in varying outcomes between service provider types. In the excellent service outcome, the stereotype

inconsistent lawyer is rated significantly higher than the stereotype consistent lawyer. In the average service outcome, the stereotype consistent lawyer and hair stylist are rated significantly higher than the stereotype inconsistent lawyer and hair stylist, respectively. In the below average service outcome, the stereotype consistent lawyer is rated significantly higher than the stereotype inconsistent lawyer. Thus, an effect between stereotype consistency and service outcome is seen for each outcome for the lawyer and the average outcome for the hair stylist. No other interactions are found.

Significant findings in the excellent service outcome are consistent with the findings of Matta and Folkes (2005). In their study, the counterstereotypical service provider is viewed more competently than the stereotypical service provider when excellent service is delivered. However, significant findings in the average service outcome are inconsistent with the findings of Matta and Folkes (2005). In their study, no significant difference was found in the mediocre service outcome with respect to stereotypicality. One possibility for the differences in support is shown through the manipulation of the stereotype. The stereotype in Matta and Folkes (2005) is based on gender, where the stereotype in this study is based on the appearance of the service provider, ignoring gender.

The inconsistent findings across service providers may be due in part to the type of service the provider performs. The doctor performs a service that has a direct effect on the wellbeing of the individual, which could potentially result in a severe outcome if the service is not performed or provided appropriately. In this scenario, subjects may generalize the potential risks to their health by a stereotype inconsistent doctor as more extreme than giving the provider the benefit of the doubt, or they may be more concerned

with the level of service being provided with no regards to the physical appearance of the provider.

No significant findings occurred between stereotype and service outcome for the nail technician. In this scenario subjects may not have believed the information presented to them as true or complete regarding the physical appearance of the provider combined with the service outcome. Another potential reason for the lack of findings is due to the nature of the relationship between a nail technician and client. While clients often see the same nail technician at each visit, it is not imperative for a client to see the same nail technician to receive excellent, average, or below average service. Often switching to a different nail technician, other than the clients regular provider, results in a similar or comparable level of service.

The interaction between innuendo and stereotype yields a significant difference in disconfirmation for the nail technician in the competence negative and affect positive conditions. In the competence negative condition subjects report a negative disconfirmation for the stereotype inconsistent nail technician, but a positive disconfirmation for the stereotype consistent nail technician. In the affect positive condition subjects report a positive disconfirmation for the stereotype inconsistent nail technician, but a negative disconfirmation for the stereotype consistent nail technician. The interaction between innuendo and stereotype is not significant for any other service provider or condition.

One potential explanation for the lack of significant findings is due to a strong effect from the service outcome subjects read. With each of the four service providers, the range between the excellent service outcome and the below average service outcome

was greater for the stereotype inconsistent service provider than it was for the stereotype consistent service provider. Given the incomplete information on the dimensions of competence or affect and the short description of physical appearance of the service provider, subjects may have viewed the service provider as less extreme in terms of expectations of the service. However, after the service was performed, subjects may have used the service outcome information only to evaluate the overall performance as extreme when provided excellent or below average service, and as consistent with expectations when provided average service.

Research Question 4 (b)

Research Question 4b focuses on the cognitive and affective effects when service providers are affected by an innuendo, stereotype influence, and/or various service outcomes. Using expectancy-disconfirmation theory (Weaver and Brickman 1974; Ilgen 1971) performance regarding purchases or actual product usage is based off of the expectations made prior to the purchase or usage. The individual then uses this disconfirmation to determine a level of satisfaction where a high (low) expectation would result in a high (low) satisfaction rating.

In each of the four service provider scenarios, disconfirmation is significantly related to subjects' satisfaction ratings. Subjects with a positive disconfirmation are found to have high satisfaction ratings and subjects with a negative disconfirmation are found to have low satisfaction ratings. Behavioral intentions follows the same pattern as satisfaction based on disconfirmation. A positive relationship exists between subjects ratings of behavioral intentions and subjects level of disconfirmation associated with the

overall service encounter. Subjects' disconfirmation ratings are created by subtracting expectation from performance. Thus, a subject with a positive disconfirmation had lower expectations ratings than performance ratings, and vice versa.

While social perception theory indicates individuals use cues to make inferences about others (Baron and Bryne 1981), it is plausible that the service outcome drove the disconfirmation ratings. Subjects were provided a description of incomplete information on one dimension and a description of the physical appearance of the service provider before answering the expectations measures. Later in the experiment subjects were prompted with a description of the encounter with the service provider, manipulated as excellent, average, and below average, before answering the performance measures. The service outcome may have prompted subjects to have more extreme views of the service encounter than did the expectations.

In each of the four service provider scenarios, quality either partially or fully mediated the relationship between disconfirmation and satisfaction. Thus, quality is shown to clarify the nature of the relationship between disconfirmation and satisfaction.

According to schema theory, a mismatch between a stimulus person and a category forces the respondent to generate additional thoughts regarding the appropriate category classification of the stimulus person. To assess the schematic match, the total number of trait items being recalled is evaluated between positive and negative disconfirmation. In each of the four service provider scenarios, no distinction is found for the total number of trait items subjects were able to recall between positive and negative levels of disconfirmation. This finding is inconsistent with that of Koernig and

Page (2002), who finds that respondents generate more total thoughts when the stimulus person does not match the category than when that stimulus person matches the category.

The inconsistent finding can be further explained. In the analysis, the total numbers of trait items are being compared between disconfirmation levels, as opposed to the number of correct trait items, the number of similar trait items, or the number of incorrect trait items. Potentially the outcome could be different given one of the other trait comparison evaluation methods. Depending on the condition, subjects may have listed the exact trait items used in the scenario, elaborated on the provided trait items from the scenario, or even provided opposing trait items as listed in the scenario when the service provider did not match what the subject envisioned given the description.

The use of Mechanical Turk respondents could be another explanation for the lack of significant findings. Mechanical Turk respondents often answer questions in a manner to which yields payment from the survey requester. For example, if an open-ended question provides respondents five blank lines and asks respondents to list as many trait items as they can recall from a provided description, respondents are likely to list five items, filling up each of the available lines. It appears respondents are more concerned about not entering enough information and not getting paid than they are about entering correct information. Further exploration is needed with regards to the number of trait items being recalled by subjects to determine if no difference actually exists or if the lack of significant findings is due to the type of sample. A future study will collect data from a sample where payment is not dependent upon the provided answers and will provide instructions to the subjects prompting them to provide only traits that they can recall from the given scenario.

Theoretical Contributions and Managerial Implications

The results of the innuendo study and the main study provide both theoretical and practical contributions to services marketing, retailing, cognitive psychology, and social psychology. Theoretical contributions will be discussed first, followed by managerial implications.

Theoretical Contributions

The development of the Service Provider Perception Framework contributes to the literature in services marketing with the addition of a classification scheme based on the dimensions of competence and affect surrounding the service provider. The framework classifies service providers along two dimensions determining their overall level of competence and affect (friendliness or pleasantness). Earlier classification schemes have classified the type of service (see Cook, Goh, and Chung 1999 for a more complete list) or the interaction between the service provider and the consumer (Mills and Marguiles 1980), but limited research has been provided on the attributes of the service provider as an individual. Using multiple service providers in the pretests and experiments demonstrates that the use of this framework is not limited to a specific type of service provider or industry, and can be beneficial in understanding characteristics of service providers and how consumers perceive them.

The introduction of the innuendo effect into service marketing provides consumers an avenue to reconcile incomplete information when it comes to conveying negative or stereotype inconsistent information. When providing information, individuals are expected to follow maxims of quality and relation (Grice 1975) by offering truthful and relevant information. Additionally, speaking favorably of others

may preserve the social harmony and keep the speakers reputation intact. Support for the innuendo effect in the services literature provides evidence that consumers' perceptions of service providers changes based on the information they are provided. Because all service providers are not viewed in the positive competence/positive affect quadrant, the innuendo effect is modified to include a stereotype inconsistent outcome on the omitted dimension given stereotype consistent information on the provided dimension. Consumers can be given positive (or stereotype consistent) information on one dimension, but draw negative (or stereotype inconsistent) conclusions based on the lack of information on the other dimension. Depending on the stereotype associated with a service provider, having consumers draw stereotype inconsistent information can be favorable if the stereotype is negative or unfavorable if the stereotype is positive.

The use of an innuendo to describe a service provider extends the schema congruity literature by showing that interpretation of provided attributes may differ as a function of an active schema. When consumers are provided incomplete knowledge regarding the provider, they are shown to be more sensitive to schema-inconsistent information. Movement within and between quadrants of the SPPF provides support for the interpretation of schema-inconsistent information, as shown through a significant shift on the provided dimension in the direction of the inconsistency in each of the four service provider types tested. When the incomplete information is consistent with the associated schema, little processing is needed to conclude that the described service provider is similar to or typical of the usual service provider in the category, and a significant shift does not occur on the provided dimension in the direction of the consistency.

This research builds upon the stereotype literature, providing additional evidence of the occupational stereotype associated with the service provider and the accompanying expectations and perceptions shown from the consumers' perception. Stereotype research on service providers indicates that counterstereotypical individuals are not dismissed, though they are perceived as different from other employees (Matta and Folkes 2005). This research measures consumers' expectations of stereotype consistent and inconsistent service providers, gaining insight into the way consumers perceive the inconsistent provider, and how their expectations change, even before a service has been performed.

Practical Implications

In addition to the theoretical implications discussed in the previous section, this research also brings relevant managerial implications to practitioners. First, the research suggests that consumers perceive service providers differently based on the description they hear, and the way the service provider looks. Because consumers rarely receive a complete description of a service provider, it is beneficial to provide information to a consumer that does not imply a negative outcome on the omitted dimension. Additionally, consumers' perceptions are affected by the physical appearance of the service provider. Taken together, these two characteristics can set the consumers' expectations prior to the service taking place. In the development of websites and the use of advertisings, practitioners must understand the stereotype associated to the service provider, and utilize incomplete information providing positive or stereotype consistent information to the consumer without having consumers infer negative or stereotype inconsistent information on the omitted dimension. The use of positive or stereotype

consistent information in the description of a service provider is important for consumers who have not yet encountered the individual. The description on a website or advertisement is the first encounter a consumer has with a service provider, thus setting their expectation level prior to meeting the actual service provider. If the description is incongruent with the stereotype, the consumer might not reconcile the differences, and decide upon a different provider for the service.

Another implication for practitioners lies within the role and script of the service encounter. In frequently encountered or routine services, role and script theories suggest both customers and employees share equivalent views of roles in the service exchange and the expected sequence of events and behaviors (Bitner, Booms, and Mohr 1994). When a consumer encounters a service provider that does not match the associated role expectations, the variance influences the consumers' cognitive and affective reactions (Merton 1957) and causes the consumer to engage in greater cognitive elaboration. In the same manner, a script is a schematic knowledge structure, held in memory describing events or behaviors indicative of a particular context (Gioia and Poole 1984). The consumer holds a script in a prototypical fashion, or from previous category-related experiences. When a consumer encounters a service provider that does not follow the prototypical script, the consumer may begin to question to competence or affect level of the service provider, and change their expectations regarding the outcome of the service encounter.

A third implication for practitioners lies in the outcome of the service. Subjects rated satisfaction and behavioral intentions higher when subjects showed a positive disconfirmation, meaning the service outcome was more positive than they had expected.

Limitations and Future Research

The present study possesses several limitations and future research possibilities. The first limitation of the research pertains to the method of data collection. The innuendo study uses a consumer panel recruited by Qualtrics to answer the related questions to each of the four experiments. The main study uses Amazon's Mechanical Turk workers to answer the related questions for three of the experiments and students at Louisiana Tech University for the fourth experiment. The inconsistency in data collection may influence the internal and external validity of the research. Subjects from each pool might have different motivations for completing the questionnaire, thus providing answers consistent to their personal beliefs or providing the answer they think the researcher wants. While the internet has become a major tool for consumers, certain groups may not be represented. Future research could reproduce the study using a consistent and/or different method of data collection.

A second limitation of the research pertains to the use of the four selected service providers. The service providers were selected through consistent responses in a series of pretests. Additionally, the four service providers represented one of the four quadrants in the SPPF. However, research is needed with additional service providers in each SPPF quadrant to determine whether the findings hold for other occupational categories within the same quadrant, or if the behaviors are different.

A third limitation of the research pertains to the characteristics of the subjects' in relation to the service provider and the subjects' personality. The research does not account for the consistencies or inconsistencies between the subject and the described service provider. For example, the inconsistent doctor was described as being slightly

overweight, needs to shave, has on a faded shirt, and wears sandals. A subject, who is also slightly overweight, needs to shave, and wears a faded shirts and sandals, may find this doctor to be less stereotype inconsistent and more comforting because the doctor can relate better to the subject. The subject views the doctor as similar to him or herself, and feels that the doctor can relate to and understand his or her needs better than a "typical" doctor. In this situation, the subject may rate the doctor completely inconsistent with other subjects' ratings. Additionally, a subject's personality may influence the way they view a service provider. In the innuendo descriptions, a service provider might have been described as quiet, shy, or serious as part of the affect negative description. If the subject is also quiet, shy, or serious, they may find comfort in the description and find the service provider to be "like me," and provide inconsistent ratings compared to other subjects.

In addition to the previous limitation, subjects were exposed to verbal descriptions of the physical appearance of the service provider. It is possible that subjects read the description, but the words did not match with the image they held for the service provider. Future research can address this problem by using photos of the service provider, or having subjects envision the service provider by prompting them with saying stereotype consistent or stereotype inconsistent.

There are also directions that warrant future research in addition to those research opportunities mentioned as part of the limitations. First, the SPPF can be extended by testing the innuendo information combined with the stereotype information to determine if the innuendo effect is more or less present when provided the additional information. In the same research stream, the innuendo effect can be evaluated in various ways. As noted previously, the innuendo effect was modified from social psychology to fit the

characteristics of service providers. The method used in this research is not the only evaluation method for the innuendo effect, and needs further exploration.

Another direction for future research is the evaluation of service providers engaging in non-occupational behaviors. While these non-occupational behaviors do not influence the service provider's ability to perform a service, the behaviors probably do influence how a consumer perceives the service provider. For example, how does a consumer perceive a stereotypical doctor smoking compared to a non-stereotypical doctor, smoking or not? In this research the consumers' personality will likely affect the expectation of the provider, and will be accounted for.

Additional research is needed in relation to schema congruity with respect to prior knowledge. The four service providers chosen for the current research are known by most consumers. The number and type of attributes recalled by subjects is likely to vary based on the amount of prior knowledge they have with the service category or the service provider. The movement within and between quadrants is also likely to change given that subjects are highly familiar or unfamiliar with the service provider. A possible outcome is that a subject with limited knowledge will rate the stereotype inconsistent service provider in a different manner than will a subject with extensive knowledge.

Lastly, future research is needed on the physical appearance or attractiveness of the service provider. Previous research by Koernig and Page (2002) evaluates the attractiveness of a service provider in a service related to attractiveness and service unrelated attractiveness. These authors update conventional wisdom and find that "what is expected is good." In 2009, Luoh and Tasur support the original conventional wisdom that "what is beautiful is good." Future research in this area will expand the prior

literature and measure the attractiveness of the service provider when attractiveness is expected in the service and when attractiveness is not expected in the service, the level of competence, the level of affect, and the expectations the consumer has of the service provider.

Figure 5.1 outlines the future research possibilities discussed in Chapter 5 and potential outlets for publication. The list is not all encompassing, but provides additional research opportunities with relation to the Service Provider Perception Framework, the innuendo effect, occupational stereotypes of service providers, and the relationship between service providers and consumers.

The Service Provider Perception Framework: Determining the levels of Competence and Affect of Service Providers
Journal of Services Research

Effects of Prior Knowledge on the Service Provider Perception Framework
Journal of Business Research

Are You Really my Doctor? Schema Congruity as a Basis for Service Provider Evaluation
Journal of Consumer Research

May I Help You? How Stereotypes and Innuendos Influence Service Encounters
Dissertation

The Influence of Personality on Service Outcomes
Journal of Services Marketing

The Impact of Non-Occupational Transgressions of the Service Provider
Journal of Services Marketing

My Doctor Looks Like a Garbage Man: Understanding the Attractiveness in Professional Service Providers
Journal of Services Marketing

You Want to Help Me? How the Innuendo Effect Influences Consumers Perceptions of Service Providers
Psychology and Marketing

The Impact of Non-Occupational Behaviors in a Service Encounter
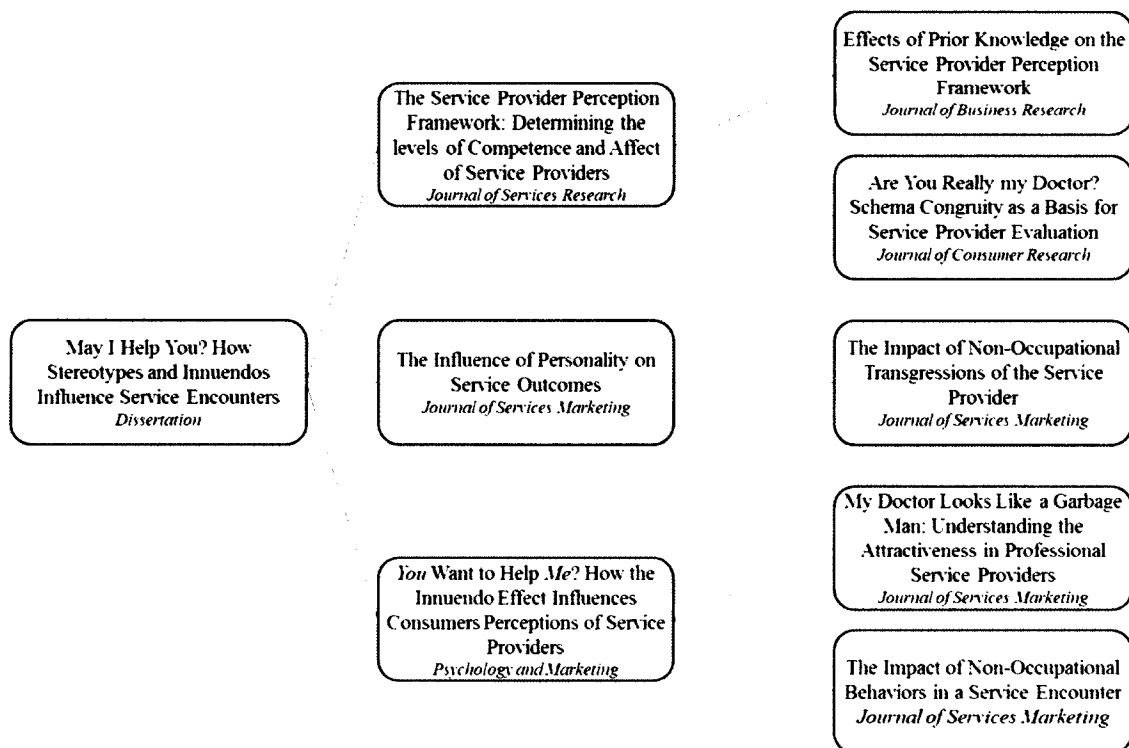*Journal of Services Marketing*

Figure 5.1 *Future Research Steam*

Conclusion

Classification schemes have been used to classify services since 1964. Since that time changes and adaptations have been made to capture various elements relating to services marketing (Cook, Goh, and Chung 1999). The current research builds on the service classification literature by creating a framework with which to capture the attributes related to the service provider as an individual. The framework is based in social psychology and the Stereotype Content Model (Fiske, Cuddy, Glick, and Xu 2002), suggesting that qualitative differences exist in stereotypes and prejudices of different groups. A series of pretests and two studies shows that differences do emerge for service providers on the dimensions of competence and affect.

The use of the innuendo (providing incomplete information) and physical appearance manipulations is shown by a change in the consumer's perception of the service provider in the SPPF. Subjects engage in greater cognitive elaboration when reconciling stereotype inconsistent information, than when they hear stereotype consistent information. Movement is seen within and between quadrants of the SPPF indicating a variation in the level of perceived competence or affect based on the provided dimension information. Additionally, subjects make judgments on the omitted dimension consistent with the innuendo effect or the halo effect depending on the nature of information provided. The use of such naïve theories allows consumers to reconcile incomplete information and draw different conclusions as a function of which naïve theory is primed (Deval, Mantel, Kardes, and Posavac 2013).

The results of the main experiment indicate that a disconfirmation occurs between the subjects' expectations and actual performance when the innuendo, stereotype, and

service outcome are manipulated. A positive disconfirmation, meaning the performance was better than expected, leads to higher satisfaction ratings and positive behavioral intentions. The service outcome was shown to be relatively influential in the overall performance ratings, and may have been viewed as more important than the innuendo or stereotype information.

In conclusion, the results of the current research display a connection between consumers' perceptions of service providers and the consumers' cognitive and affective outcomes from engaging in a service encounter when the service provider is affected by the innuendo, stereotype influence, and service outcome manipulations. This study sheds some light in the services literature on the relationship between a consumer and a service provider furthering the understanding of how and why consumers behave in service encounters.

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APPENDIX A

HUMAN USE COMMITTEE APPROVAL FORM

LOUISIANA TECH
U N I V E R S I T Y
MEMORANDUM

OFFICE OF UNIVERSITY RESEARCH

TO: Ms. Lauren Brewer and Dr. Barry Babin

FROM: Barbara Talbot, University Research

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: October 1, 2013

In order to facilitate your project, an EXPEDITED REVIEW has been done for your proposed study entitled:

"May I Help You? How Stereotypes and Innuendos Influence Service Encounters"

HUC 1117

The proposed study's revised procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Informed consent is a critical part of the research process. The subjects must be informed that their participation is voluntary. It is important that consent materials be presented in a language understandable to every participant. If you have participants in your study whose first language is not English, be sure that informed consent materials are adequately explained or translated. Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

Projects should be renewed annually. *This approval was finalized on October 1, 2013 and this project will need to receive a continuation review by the IRB if the project, including data analysis, continues beyond October 1, 2014.* Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-2292 or 257-5066.

APPENDIX B

INNUENDO STUDY MANIPULATIONS

Innuendo Study: DOCTOR

Imagine that you have recently moved to a new city and you need to select a doctor for services regarding chronic migraines that may be caused from high blood pressure.
A colleague mentions a doctor they know.
You ask your colleague, "Tell me about this doctor"; the colleague replies:

Complete Information (Stereotype Consistent)
"This doctor attended a prestigious medical school, is associated with a well-known hospital, is pleasant, and has a good sense of humor."
Positive Competence Only (Stereotype Consistent)
"This doctor attended a prestigious medical school, is associated with a well-known hospital, and has published research on neurology."
Negative Competence Only (Stereotype Inconsistent)
"This doctor attended a regional medical school, is associated with a local clinic, and refers to webmd.com."
Positive Affect Only (Stereotype Consistent)
"This doctor is pleasant, has a good sense of humor, and is empathetic."
Negative Affect Only (Stereotype Inconsistent)
"This doctor is cold, hurried, and aloof."

Innuendo Study: LAWYER

Imagine that you have recently moved to a new city and you need to select a lawyer regarding a personal legal situation.
A colleague mentions a lawyer they know.
You ask your colleague, "Tell me about this lawyer"; the colleague replies:

Complete Information (Stereotype Consistent)
"This lawyer passed the bar exam on the first try, attended a prestigious law school, and is cold and temperamental."
Positive Competence Only (Stereotype Consistent)
"This lawyer passed the bar exam on the first try, attended a prestigious law school, and is located near the courthouse in a high rise building."
Negative Competence Only (Stereotype Inconsistent)
"This lawyer passed the bar exam on the fifth try, attended a local law school, and is conveniently located in your neighborhood."
Positive Affect Only (Stereotype Inconsistent)
"This lawyer is very friendly, patient, and happy."
Negative Affect Only (Stereotype Consistent)
"This lawyer is cold, temperamental, and intimidating."

Innuendo Study: HAIR STYLIST

Imagine that you have recently moved to a new city and you need to select a hair stylist for services before attending a black tie gala.
A colleague mentions a hair stylist they know.
You ask your colleague, "Tell me about this hair stylist"; the colleague replies:

Complete Information (Stereotype Consistent)
"This hair stylist received on the job training, only performs cuts and styles, and is friendly and happy."
Positive Competence Only (Stereotype Inconsistent)
"This hair stylist is a graduate of a professional styling school, is a certified beautician, and is proficient in colors and highlights."
Negative Competence Only (Stereotype Consistent)
"This hair stylist received on the job training, is available without waiting, and only performs cuts and styles."
Positive Affect Only (Stereotype Consistent)
"This hair stylist is friendly, patient, and happy."
Negative Affect Only (Stereotype Inconsistent)
"This hair stylist is quiet, reserved, and serious."

Innuendo Study: NAIL TECHNICIAN

Imagine that you have recently moved to a new city and you would like to select a nail technician for services before attending a friend's upcoming wedding.
A colleague mentions a nail technician they know.
You ask your colleague, "Tell me about this nail technician"; the colleague replies:

Complete Information (Stereotype Consistent)
"This nail technician learned on the job, provides only manicures, is impatient, and serious."
Positive Competence Only (Stereotype Inconsistent)
"This nail technician is a certified beautician, is college educated, and provides a high quality massage during service."
Negative Competence Only (Stereotype Consistent)
"This nail technician learned on the job, earned a GED, and performs only manicures."
Positive Affect Only (Stereotype Inconsistent)
"This nail technician is friendly, patient, and happy."
Negative Affect Only (Stereotype Consistent)
"This nail technician is quiet, impatient, and serious."

APPENDIX C

INNUENDO STUDY QUESTIONNAIRE

Subjects are presented one innuendo manipulation for the selected service provider.

Based on the description of the (service provider) provided by your colleague, indicate your perception of this (service provider).

Please provide as many phrases, terms or sentences that you believe might describe this (service provider) even beyond what your colleague said (use the tab key to move to the next block):

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[                                                                    ]
[                                                                    ]
[                                                                    ]
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Picture the (service provider) based on your general perception.

Based on your initial impression, rate the extent to which each of the following traits fit this (service provider):

	Does Not Fit At All						Fits Extremely Well
Affordable	o	o	o	o	o	o	o
Attractive	o	o	o	o	o	o	o
Capable	o	o	o	o	o	o	o
Cold	o	o	o	o	o	o	o
Competent	o	o	o	o	o	o	o
Confident	o	o	o	o	o	o	o
Conscientious	o	o	o	o	o	o	o
Disorganized	o	o	o	o	o	o	o

Picture the (service provider) based on your general perception.

Based on your initial impression, rate the extent to which each of the following traits fit this (service provider):

	Does Not Fit At All						Fits Extremely Well
Efficient	o	o	o	o	o	o	o
Empathetic	o	o	o	o	o	o	o
Expensive	o	o	o	o	o	o	o
Friendly	o	o	o	o	o	o	o
Good-Natured	o	o	o	o	o	o	o
Intelligent	o	o	o	o	o	o	o
Irritable	o	o	o	o	o	o	o
Lazy	o	o	o	o	o	o	o

Picture the (service provider) based on your general perception.

Based on your initial impression, rate the extent to which each of the following traits fit this (service provider):

	Does Not Fit At All						Fits Extremely Well
Pleasant	o	o	o	o	o	o	o
Professional	o	o	o	o	o	o	o
Sincere	o	o	o	o	o	o	o
Skillful	o	o	o	o	o	o	o
Tidy/Neat	o	o	o	o	o	o	o
Trustworthy	o	o	o	o	o	o	o
Up-to-Date	o	o	o	o	o	o	o
Warm	o	o	o	o	o	o	o

According to the scenario, the colleague described the (service provider) with terms addressing:

o Competence Only (things related to skills)
o Affect Only (things related to feelings like friendliness)
o Both Competence and Affect

According to the scenario, the colleague described the (service provider) with terms that were:

o Positive Only
o Negative Only
o Both Positive and Negative
o Neither Positive nor Negative

Please read each statement below and indicate your level of agreement by choosing the appropriate option ranging from "strongly disagree" to "strongly agree."

	Strongly Disagree						Strongly Agree
I could trust this (service provider).	o	o	o	o	o	o	o
I could count on this (service provider) to do what is right.	o	o	o	o	o	o	o
I am paying attention and will select disagree to this statement.	o	o	o	o	o	o	o
This (service provider) is someone that I would have great confidence in.	o	o	o	o	o	o	o
I could rely on this (service provider).	o	o	o	o	o	o	o

Please rate the extent to which you consider this (service provider) to be more or less capable than other (service providers):

Less Capable   More capable

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

Please rate the extent to which you consider this (service provider) to be more or less likable than other (service providers):

Less Likable   More likable

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

Take a look at the following item pairs and think about the service you might receive from this (service provider). For each pair, select the term that best describes your attitude toward using this particular (service provider).

Bad	o	o	o	o	o	o	o	Good
Favorable	o	o	o	o	o	o	o	Unfavorable
Negative	o	o	o	o	o	o	o	Positive
Like	o	o	o	o	o	o	o	Dislike

According to the scenario, the colleague described a (service provider) to you for services (specific to each service provider). To show that you are paying attention, ignore the following question and select the first answer choice below.

How often do you see a (service provider) for (specific service)?

o Frequently
o Occasionally
o Rarely
o Never

Please rate the extent to which you think this (service provider) would make a good (service provider).

Not At All   Definitely Would

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

Please think about the traits that are commonly associated with (service providers). Based on these traits, how does this (service provider) compare with what you expect in a (service provider)?

Does not   Definitely compares
at all compare   very well

0   10   20   30   40   50   60   70   80   90   100
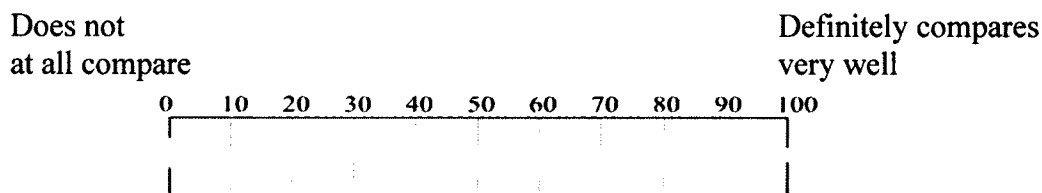
To what extent are the traits describing this (service provider) consistent with those of a typical (service provider)?

Not at all consistent   Definitely consistent

0   10   20   30   40   50   60   70   80   90   100
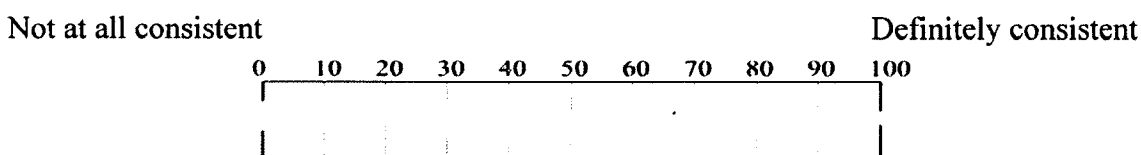
Please rate the extent to which you think this (service provider) would be more or less expensive than other (service providers):

Less expensive   More expensive

0   10   20   30   40   50   60   70   80   90   100
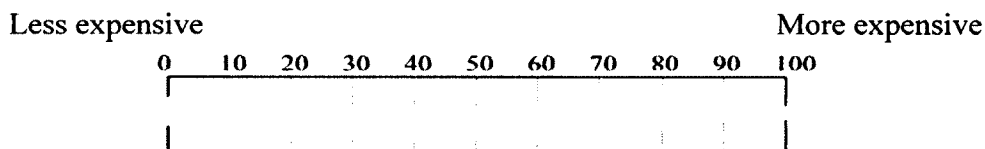
Pretend that you actually need to select a (service provider) for service regarding (specific to the service provider).

Based on your impression of the (service provider) so far, how likely would you be to select this (service provider) for service?

Very Probable	o	o	o	o	o	o	o	Not Probable
Highly Unlikely	o	o	o	o	o	o	o	Highly Likely
No Chance	o	o	o	o	o	o	o	Almost Certain

Based on the scenario, the colleague described the (service provider) with terms addressing:

Affect (Friendliness)   Competence

0   10   20   30   40   50   60   70   80   90   100

Based on the scenario, the colleague described the (service provider) with terms that were:

Negative   Positive

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
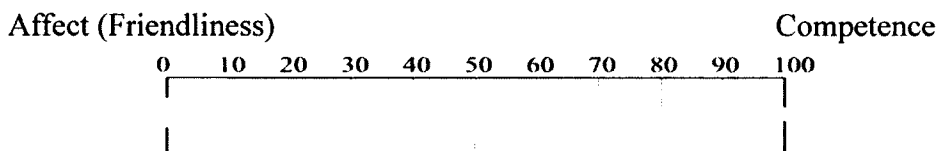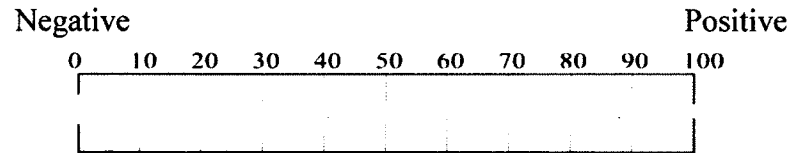
As before, use the scale items to express your level of agreement with the following statements:

	Strongly Disagree						Strongly Agree
I would expect this (service provider) to provide superior service.	o	o	o	o	o	o	o
I believe this (service provider) will offer excellent service.	o	o	o	o	o	o	o
I believe I can read this statement. Select Agree.	o	o	o	o	o	o	o
I believe this (service provider) would not contribute to a positive service experience.	o	o	o	o	o	o	o

Based on the description provided by your colleague, using this (service provider) would result in:

Failure	o	o	o	o	o	o	o	Success
Excitement	o	o	o	o	o	o	o	Boredom
Poor Value	o	o	o	o	o	o	o	Good Value
Poor Choice	o	o	o	o	o	o	o	Wise Choice

Please read each statement below and indicate your level of agreement by choosing the appropriate option ranging from "strongly disagree" to "strongly agree."

	Strongly Disagree						Strongly Agree
I frequently use the services of a (service provider).	o	o	o	o	o	o	o
I am familiar with characteristics of (service providers)	o	o	o	o	o	o	o

Have you ever used the services of a (service provider)?

o Yes
o No

Based on the description of the (service provider) provided by your colleague, what is the highest price you would pay for a visit with this (service provider)?

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Please list any additional information you would like to receive about this (service provider) before making a decision to select them for service.

Again, provide as many phrases, terms or sentences that you believe might describe this (service provider) even beyond what your colleague said (use the tab key to move to the next block):

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Which of the following terms were used to describe the (service provider) in the opening of this survey? Check off below descriptors that were used to describe the (service provider):

-Descriptors specific to each service provider

Please provide any additional comments you have regarding this survey.

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Please answer the following questions:

What is your sex?

o   Male
o   Female

Please specify your ethnicity.

o   White
o   Hispanic or Latino
o   Black or African American
o   Native American or American Indian
o   Asian / Pacific Islander
o   Other

What is the highest level of education you have completed?

- o Less than High School
- o High School / GED
- o Some College
- o 2-year College Degree
- o 4-year College Degee
- o Masters Degree
- o Doctoral Degree
- o Professional Degree (JD, MD)

What year were you born?

What is your current occupation?

What is your 5-digit postal code?

APPENDIX D

MAIN STUDY MANIPULATIONS

Main Study: DOCTOR

Innuendo manipulations remain the same from the Innuendo Study.

You decide to select this doctor. Once you arrive at your visit, you are taken to the exam room. On your way to the exam room you notice the doctor's diploma and board certifications displayed on the wall.

Stereotype Consistent
You notice that the doctor is physically fit, is well groomed, is professionally dressed, wears a white lab coat, and has a stethoscope around their neck.

Stereotype Inconsistent
You notice that the doctor is slightly overweight, needs to shave, has on a faded shirt, wears sandals, and has a stethoscope in their back pocket.

After your visit you think back to your experience with this doctor.

Excellent
When the nurse left the examination room, the doctor arrived in less than five minutes and was already familiar with your chart. The doctor asked many questions regarding your general health and specific questions surrounding your migraines. The doctor listened carefully as you explained your symptoms and was familiar with your situation. The doctor spent a generous amount of time with you providing several options to help alleviate your migraines including options of medication and lifestyle changes and answered any additional questions you had.

Average
When the nurse left the examination room, the doctor arrived in about a quarter of an hour and was looking at your chart while entering the room. The doctor asked specific questions regarding your migraines, but did not ask questions about your general health or your lifestyle. The doctor listened as you explained your symptoms and provided quick responses. The doctor promptly considered the information and told you what medicine might alleviate your migraines.

Below Average
When the nurse left the examination room, the doctor arrived in about an hour and began looking over your chart. The doctor read your symptoms off your chart in the room, but did not have you elaborate on any of your issues or symptoms. The doctor responded to your questions as you asked them, providing prompt answers and left the room. The doctor told the nurse to write a prescription for a medicine and she referred you to the internet for more information.

Main Study: Lawyer

Innuendo manipulations remain the same from the Innuendo Study.

You decide to select this lawyer. Once you arrive you see the lawyer's diploma and board certifications displayed on the wall and notice several things about this lawyer.

Stereotype Consistent
You notice that the lawyer is well groomed with slicked back hair, professionally dressed in a dark suit, and has an expensive leather briefcase on the desk with documents neatly tucked inside.

Stereotype Inconsistent
You notice that the lawyer appears to be growing a beard, is casually dressed, and has papers sticking out of a canvas tote bag.

After your visit you think back to your experience with this lawyer.

Excellent
When you arrived for your consultation visit you were promptly greeted by the lawyer's secretary, offered a beverage, and taken to the office. The lawyer allowed you to speak first to explain your situation and asked follow up questions for more detail when necessary. The lawyer was professional and explained the possible courses of action in a way that you could understand. The lawyer spent a generous amount of time with you and answered all additional questions you had. At the end of the visit you were told what fees would be expected moving forward.

Average
When you arrived for your consultation visit you were greeted by the secretary and waited for ten minutes. The lawyer allowed you to speak first to explain your situation but did not ask any follow up questions. At one point the secretary interrupted the meeting to give the lawyer a message. The lawyer provided you with a potential solution to your situation and answered your questions concisely. At the end of the visit the lawyer told you how much the service would cost, and then you asked for an explanation of fees.

Below Average
When you arrived for your consultation visit you signed in on a clip board and waited for about thirty minutes. The lawyer called you into his office and told you to explain your situation. The lawyer scribbled notes on scrap paper before getting interrupted by a personal call on his cell phone. The lawyer did not say a lot, but did say additional appointments would be needed and walked toward the door as you asked questions. At the end of the visit you were told the fee for the consultation and that other fees would be incurred going forward.

Main Study: Hair Stylist

Innuendo manipulations remain the same from the Innuendo Study.

You decide to make an appointment with this hair stylist. Once you arrive at the hair salon you notice several things about your hair stylist.

Stereotype Consistent
You notice that the hair stylist reminds you of a previous stylist you used. She has fashionably styled healthy hair, is wearing an apron with sheers and a comb in the pocket, and is wearing appealing makeup.

Stereotype Inconsistent
You notice that the hair stylist does not remind you of any hair stylist you have seen before. She is the only person in the salon without an apron on; she is wearing thick-rimmed glasses, and uses the pockets of her shorts to hold her sheers and comb.

Excellent
When you arrived at the salon, you were promptly greeted by the stylist, offered a complementary drink, and led to her work station. You noticed that the station was clean with the most up-to-date, cutting edge styling tools. Before shampooing your hair, the stylist listened to the type of cut and style you were interested in. She focused only on you during the appointment while engaging in good conversation. At the end of the appointment you saw the style was exactly as you had described and looked fantastic.

Average
When you arrived at the salon, you were greeted after a few minutes by the stylist and led to her work station. You noticed that the hair stylist had to search for the correct styling tools at her station. Before shampooing your hair, the stylist asked about the type of cut and style you were interested in. During the appointment she engaged in conversation with you and other hair stylists. At the end of the appointment you saw the style was similar to the one you had described and looked nice.

Below Average
When you arrived at the salon, you were greeted after several minutes by the stylist and she pointed to the station for you to go sit at. You noticed that the hair stylist had to borrow a brush and blow dryer from a difference station. Before shampooing your hair, the stylist listened to the type of cut and style you wanted, but said that style would look bad with your face shape. During the appointment she engaged in conversation with other stylists and complained about her personal life. At the end of the appointment you saw the style was not at all as you had described, and had pieces of hair down your back.

Main Study: Nail Technician

Innuendo manipulations remain the same from the Innuendo Study.

You decide to select this nail technician. Once you arrive at the nail salon you notice several things about the nail technician.

Stereotype Consistent
You notice that the nail technician is petite with black hair, has manicured finger nails, and wears a white smock over her clothing.

Stereotype Inconsistent
You notice that the nail technician has short, spiky blonde hair, blue eyes, and wears shorts, a t-shirt, and flip flops.

Excellent
When you arrived at the salon, you were promptly greeted by the manicurist and led to her work station. You noticed that the station was clean and the equipment had just been sterilized. The nail technician was friendly and chatted only with you during the visit. She massaged your hands and was very careful to not cause you any pain. At the end of the appointment you noticed that she did an excellent job painting your nails, and did not get any polish on your skin.

Average
When you arrived at the salon, you were greeted after a few minutes by the manicurist and led to her work station. You noticed that the station was disorganized but new equipment was on the table. The nail technician was friendly, but conversed with the other nail technicians in their language. She worked quickly and was very careful to not cause you any pain. At the end of the appointment you noticed that the polish was nice but there was a little polish on your skin.

Below Average
When you arrived at the salon, you were greeted after several minutes by the manicurist and she pointed to the station for you to go sit at. You noticed that the station was disorganized and the equipment from the previous customer was still on the table. The nail technician spent most of the appointment conversing with another technician in their language. She was slightly rushed and clipped your cuticles too close. At the end of the appointment you noticed that the polish was sloppy and there was polish on your skin.

APPENDIX E

MAIN STUDY QUESTIONNAIRE

Subjects are presented one innuendo manipulation and one stereotype manipulation for the selected service provider.

Based on your initial impression, please indicate your level of agreement or disagreement with the following statements.

	Strongly Disagree						Strongly Agree
I expect this (service provider) to be sympathetic.	o	o	o	o	o	o	o
I do not expect this (service provider) to be reassuring.	o	o	o	o	o	o	o
I expect this (service provider) to be dependable.	o	o	o	o	o	o	o
I expect this (service provider) to tell me exactly what services will be performed.	o	o	o	o	o	o	o
Expecting prompt service from this (service provider) is realistic.	o	o	o	o	o	o	o
I do not expect to feel safe in my transactions with this (service provider).	o	o	o	o	o	o	o
Mark the fourth answer choice.	o	o	o	o	o	o	o
I expect this (service provider) to be polite.	o	o	o	o	o	o	o
I do not expect this (service provider) to give me individual attention.	o	o	o	o	o	o	o
I expect this (service provider) to know what my needs are.	o	o	o	o	o	o	o
I expect this (service provider) to have my best interest at heart.	o	o	o	o	o	o	o

Based on your initial impression, rate the extent to which each of the following traits fit this (service provider):

	Does Not Fit At All						Fits Extremely Well
Affordable	o	o	o	o	o	o	o
Attractive	o	o	o	o	o	o	o
Capable	o	o	o	o	o	o	o
Cold	o	o	o	o	o	o	o
Competent	o	o	o	o	o	o	o
Confident	o	o	o	o	o	o	o
Conscientious	o	o	o	o	o	o	o
Disorganized	o	o	o	o	o	o	o

Based on your initial impression, rate the extent to which each of the following traits fit this (service provider):

	Does Not Fit At All		Fits Extremely Well

Efficient	o	o	o	o	o	o	o
Empathetic	o	o	o	o	o	o	o
Expensive	o	o	o	o	o	o	o
Friendly	o	o	o	o	o	o	o
Good-Natured	o	o	o	o	o	o	o
Intelligent	o	o	o	o	o	o	o
Irritable	o	o	o	o	o	o	o
Lazy	o	o	o	o	o	o	o

Based on your initial impression, rate the extent to which each of the following traits fit this (service provider):

	Does Not Fit At All						Fits Extremely Well
Pleasant	o	o	o	o	o	o	o
Professional	o	o	o	o	o	o	o
Sincere	o	o	o	o	o	o	o
Skillful	o	o	o	o	o	o	o
Tidy/Neat	o	o	o	o	o	o	o
Trustworthy	o	o	o	o	o	o	o
Up-to-Date	o	o	o	o	o	o	o
Warm	o	o	o	o	o	o	o

Based on the information provided by your colleague and your impression of the (service provider) when they entered the room, please rate the extent to which you would feel each emotion below on the scale ranging from "Would not feel at all" to "Would feel very strongly."

	Would not feel at all						Would feel very strongly
Relaxed	o	o	o	o	o	o	o
Confident	o	o	o	o	o	o	o
Guilty	o	o	o	o	o	o	o
Satisfied	o	o	o	o	o	o	o
Hopeful	o	o	o	o	o	o	o
Nervous	o	o	o	o	o	o	o
Ashamed	o	o	o	o	o	o	o
Annoyed	o	o	o	o	o	o	o
Worried	o	o	o	o	o	o	o
Happy	o	o	o	o	o	o	o
Eager	o	o	o	o	o	o	o
Flustered	o	o	o	o	o	o	o
Attentive	o	o	o	o	o	o	o
In Control	o	o	o	o	o	o	o

According to the scenario, the colleague described a (service provider) to you for services (specific to each service provider). To show that you are paying attention, ignore the following question and select the first answer choice below.

How often do you see a (service provider) for (specific service)?

o Frequently
o Occasionally
o Rarely
o Never

Please list as many characteristics as you can recall from the brief description of the (service provider) provided by your colleague:

Please list as many characteristics as you can recall that you noticed once you saw the (service provider):

Subjects are presented one service outcome manipulation for the selected service provider.

Based on your impression after your visit with this lawyer, please indicate your level of agreement or disagreement with the following statements.

	Strongly Disagree						Strongly Agree
This (service provider) was sympathetic.	o	o	o	o	o	o	o
This (service provider) was not reassuring.	o	o	o	o	o	o	o
This (service provider) was dependable.	o	o	o	o	o	o	o
This (service provider) told me exactly what services will be performed.	o	o	o	o	o	o	o
I received prompt service from this (service provider).	o	o	o	o	o	o	o
I did not feel safe in my transactions with this (service provider).	o	o	o	o	o	o	o
I will mark Disagree to be correct.	o	o	o	o	o	o	o
This (service provider) was polite.	o	o	o	o	o	o	o

This (service provider) did not give me individual attention.	o	o	o	o	o	o	o
This (service provider) knew what my needs were.	o	o	o	o	o	o	o
This (service provider) had my best interest at heart.	o	o	o	o	o	o	o

Please slide the bar to the position that best signifies your level of agreement with the following statements.

The probability that I will use this (service provider) again is:

0	10	20	30	40	50	60	70	80	90	100

The likelihood that I would recommend this (service provider) to a friend is:

0	10	20	30	40	50	60	70	80	90	100

I am paying attention and will select seven.

0	10	20	30	40	50	60	70	80	90	100

If I had to do it over again, I would see the same (service provider).

0	10	20	30	40	50	60	70	80	90	100

Please indicate your level of agreement or disagreement with the following statements.

	Strongly Disagree						Strongly Agree
I will say positive things about this (service provider) to other people.	o	o	o	o	o	o	o
I am satisfied with the level of service this (service provider) has provided.	o	o	o	o	o	o	o
I will recommend this (service provider) to people I know who are asking my advice.	o	o	o	o	o	o	o
In general, I am very satisfied with my dealings with this (service provider).	o	o	o	o	o	o	o
I would feel very uneasy recommending this (service provider) to people I know.	o	o	o	o	o	o	o
I will indicate I am human and mark agree for this (service provider) question.	o	o	o	o	o	o	o
I will encourage friends and relatives to visit this (service provider).	o	o	o	o	o	o	o
The (service provider) did nothing to make me feel satisfied with my experience.	o	o	o	o	o	o	o
I will not recommend this (service provider) as a good option.	o	o	o	o	o	o	o

Based on your impression of the service, please indicate your level of agreement with the following statements.

	Strongly Disagree						Strongly Agree
I feel very confident about this (service provider's) skills.	o	o	o	o	o	o	o
This (service provider) is very capable of performing the job.	o	o	o	o	o	o	o
This (service provider) would not knowingly do anything to hurt me.	o	o	o	o	o	o	o
This (service provider) will go out of his/her way to help me.	o	o	o	o	o	o	o
My needs and desires are very important to this (service provider).	o	o	o	o	o	o	o
This (service provider) has specialized capabilities that can increase work performance.	o	o	o	o	o	o	o
This (service provider) has much knowledge about the work that needs done.	o	o	o	o	o	o	o
This (service provider) is well qualified.	o	o	o	o	o	o	o
This (service provider) is known to be successful at the things he/she tries to do.	o	o	o	o	o	o	o
This (service provider) really looks out for what is important to me.	o	o	o	o	o	o	o
This (service provider) is very concerned with my welfare.	o	o	o	o	o	o	o

Please read each statement below and indicate your level of agreement by choosing the appropriate option ranging from "strongly disagree" to "strongly agree."

	Strongly Disagree						Strongly Agree
I could trust this (service provider) completely.	o	o	o	o	o	o	o
I could count on this (service provider) to do what is right.	o	o	o	o	o	o	o
I am paying attention and will select disagree to this statement.	o	o	o	o	o	o	o
This (service provider) is someone that I would have great confidence in.	o	o	o	o	o	o	o
I could rely on this (service provider).	o	o	o	o	o	o	o

Use the following percentage scale to indicate your level of satisfaction. Please move the slider to the percentage best describing your level of satisfaction experienced from this (service provider):

```
   0    10   20   30   40   50   60   70   80   90   100
```

Which of the following choices best describes the level of satisfaction you experienced from this (service provider):

○   No Satisfaction
○   Some Satisfaction
○   Satisfaction
○   Very Much Satisfaction
○   Extreme Satisfaction

I feel satisfied with my experience from this (service provider).

○   Not at all satisfied
○   Slightly satisfied
○   Moderately satisfied
○   Very satisfied
○   Completely satisfied

Please respond to the following based on how you feel about your overall experience with this (service provider). The scale ranges from 1 = "Not at all," meaning you did not feel that emotion at all, to 7 = "Very much felt," meaning you felt that emotion very much:

	Did not feel At all						Very much felt
Satisfaction	○	○	○	○	○	○	○
Anxious	○	○	○	○	○	○	○
Delighted	○	○	○	○	○	○	○
Angry	○	○	○	○	○	○	○

Please rate the overall service quality you received from this (service provider):

Poor	○	○	○	○	○	○	○	Excellent
Superior	○	○	○	○	○	○	○	Inferior
Low Standard	○	○	○	○	○	○	○	High Standard

Compared to what I expected the (service provider) to be like:

	Much worse than expected			Pretty much as expected			Much better than expected
The encounter I had with this (service provider) was:	○	○	○	○	○	○	○
The benefits I expected with this	○	○	○	○	○	○	○

(service provider) were:

Overall this (service provider) was: o   o   o   o   o   o   o

Please indicate your level of agreement or disagreement with the following statements.

	Strongly Disagree						Strongly Agree
This (service provider) is typical of (service providers).	o	o	o	o	o	o	o
This (service provider's) appearance is appropriate for a (service provider).	o	o	o	o	o	o	o
This (service provider) matches my idea of what a (service provider) is.	o	o	o	o	o	o	o
This (service provider) could only be described as an unusual (service provider).	o	o	o	o	o	o	o

According to the scenario, the colleague described the (service provider) with terms addressing:

o   Competence Only (things related to skills)
o   Affect Only (things related to feelings like friendliness)
o   Both Competence and Affect

According to the scenario, the colleague described the (service provider) with terms that were:

o   Positive Only
o   Negative Only
o   Both Positive and Negative
o   Neither Positive nor Negative

According to the scenario, when you arrived at the (service provider's) office for your appointment the (service provider) was:

o   Consistent with the stereotype I hold for a (service provider).
o   Inconsistent with the stereotype I hold for a (service provider).

When you think back on your appointment, what level of service was provided by the (service provider)?

o   Excellent
o   Average
o   Below Average

Please answer the following questions:

What is your sex?

o   Male
o   Female

Please specify your ethnicity.

o   White
o   Hispanic or Latino
o   Black or African American
o   Native American or American Indian
o   Asian / Pacific Islander
o   Other

What is the highest level of education you have completed?

o   Less than High School
o   High School / GED
o   Some College
o   2-year College Degree
o   4-year College Degee
o   Masters Degree
o   Doctoral Degree
o   Professional Degree (JD, MD)

What year were you born?

```
[                                                              ]
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What is your current occupation?

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[                                                              ]
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What do you think is the purpose of this study?

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[                                                              ]
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Please provide any additional comments you have regarding this survey.

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[                                                              ]
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APPENDIX F

MEASUREMENT SCALES

Expectation Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
Expec1: I expect this service provider to be sympathetic.	.71	.51	0.64	.82
Expec2: I do not expect this service provider to be reassuring. (r)	.66	.52	0.71	.72
Expec3: I expect this service provider to be dependable.	.81	.82	0.86	.87
Expec4: I expect this service provider to tell me exactly what services will be performed.	.80	.75	0.81	.81
Expec5: Expecting prompt service from this service provider is realistic.	.75	.78	0.77	.81
Expec6: I expect to feel safe in my transactions with service provider. ((r) for doctor)	.74	.76	0.87	.89
Expec7: I expect this service provider to be polite.	.84	.71	0.79	.84
Expec8: I do not expect this service provider to give me individual attention. (r)	.76	.66	0.72	.67
Expec9: I expect this service provider to know what my needs are.	.66	.74	0.64	.74
Expec10: I expect this service provider to have my best interest at heart.	.85	.78	0.82	.85

Performance Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
Perform1: This doctor was sympathetic.	.91	.91	0.84	.88
Perform2: This doctor was not reassuring. (r)	.80	.81	0.82	.74
Perform3: This doctor was dependable.	.90	.88	0.95	.96
Perform4: This doctor told me exactly what services will be performed.	.86	.87	0.78	.83
Perform5: I received prompt service from this doctor.	.88	.91	0.83	.86
Perform6: I did not feel safe in my transactions with this doctor. (r)	.83	.89	0.92	.94
Perform7: This doctor was polite.	.86	.90	0.93	.93
Perform8: This doctor did not give me individual attention. (r)	.88	.86	0.81	.75
Perform9: This doctor knew what my needs were.	.89	.90	0.86	.90
Perform10: This doctor had my best interest at heart.	.92	.92	0.95	.95

Disconfirmation Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
D1: Perform1 - Expec1	.87	.82	0.81	.86
D2: Perform2 - Expec2	.75	.63	0.77	.74
D3: Perform3 - Expec3	.87	.80	0.92	.92
D4: Perform4 - Expec4	.83	.79	0.80	.80
D5: Perform5 - Expec5	.84	.84	0.81	.84
D6: Perform6 - Expec6	.81	.78	0.92	.93
D7: Perform7 - Expec7	.84	.86	0.90	.90
D8: Perform8 - Expec8	.84	.75	0.74	.75
D9: Perform9 - Expec9	.79	.79	0.77	.85
D10: Perform10 - Expec10	.88	.86	0.92	.91

Attitude Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
Att1: I feel very confident about this hair stylist's skills.	.92	.91	0.96	.95
Att2: This hair stylist is very capable of performing the job.	.94	.91	0.94	.92
Att3: This hair stylist would not knowingly do anything to hurt me.	.78	.81	0.86	.83
Att4: This hair stylist will go out of his/her way to help me.	.89	.87	0.95	.93
Att5: My needs and desires are very important to this hair stylist.	.92	.90	0.96	.93
Att6: This hair stylist has specialized capabilities that can increase work performance.	.84	.79	0.87	.91
Att7: This hair stylist has much knowledge about the work that needs done.	.88	.89	0.97	.92
Att8: This hair stylist is well qualified.	.87	.87	0.94	.93
Att9: This hair stylist is known to be successful at the things he/she tries to do.	.81	.78	0.90	.94
Att10: This hair stylist really looks out for what is important to me.	.93	.92	0.95	.94
Att11: This hair stylist is very concerned with my welfare.	.93	.90	0.95	.92

Behavioral Intention Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
Int1: The probability that I will use this hair stylist again is:	.99	.99	.99	.99
Int2: The likelihood that I would recommend this hair stylist to a friend is:	.99	.98	.99	.99
Int6: If I had to do it over again, I would see the same hair stylist.	.98	.98	.99	.99

Typicalness Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
Typ1: This hair stylist is typical of hair stylists.	.74	.73	.70	.80
Typ2: This hair stylist's appearance is appropriate for a hair stylist.	.82	.87	.82	.85
Typ3: This hair stylist matches my idea of what a hair stylist is.	.79	.90	.85	.91
Typ4: This hair stylist could only be described as an unusual hair stylist. (r)	.80	.78	.80	.50

Quality Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
Qual1: Please rate the overall service quality you received from this hair stylist:-Poor: Excellent	.98	.98	.98	.96
Qual2: Please rate the overall service quality you received from this hair stylist:-Superior: Inferior (r)	.97	.94	.97	.89
Qual3: Please rate the overall service quality you received from this hair stylist:-Low Standard: High Standard	.98	.98	.99	.96

Satisfaction Scale

Item name and Stem	Doctor	Lawyer	Hair Stylist	Nail Technician
Sat1: Please move the slider to the percentage best describing your level of satisfaction experienced from this hair stylist:	.98	.98	.99	.98
Sat2: Which of the following choices best describes the level of satisfaction you experienced from this hair stylist:	.98	.98	.99	.97
Sat3: I feel satisfied with my experience from this hair stylist.	.98	.98	.99	.98
Sat4: Please respond to the following based on how you feel about your overall experience with this hair stylist: Satisfaction	.98	.98	.99	.98